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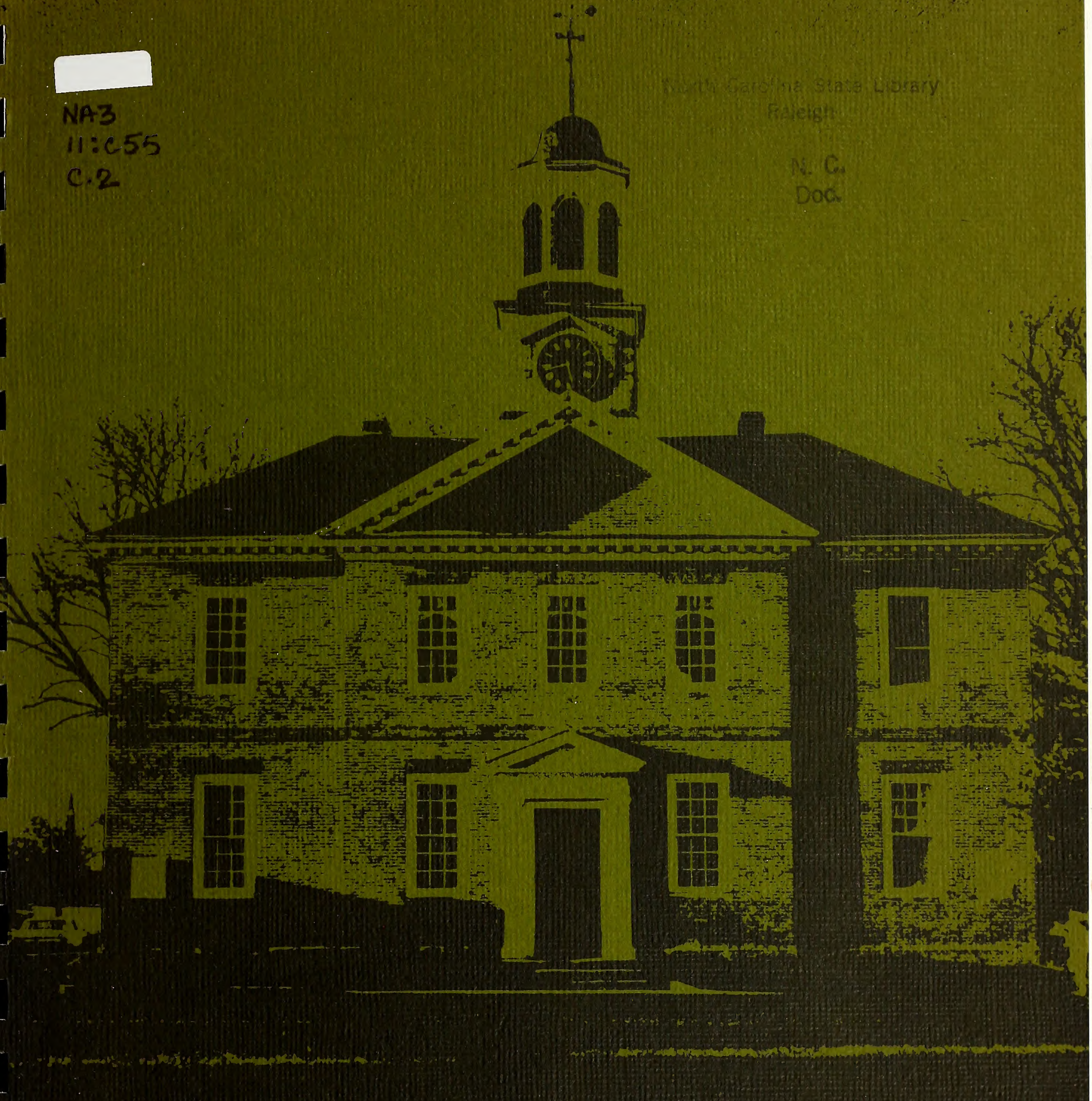

LAND POTENTIAL STUDY AND SKETCH DEVELOPMENT PLAN

CHOWAN COUNTY, NORTH CAROLINA

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The Land Potential Study is the basic element of the Sketch Development Plan. Its primary purpose is to provide information as to the potential the land within Chowan County has for residential, commercial, industrial, recreational and agricultural development.

The Sketch Development Plan illustrates the most desirable arrangement of major land uses in Chowan County for the next twenty years.

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Location	Sketch Development Goals and Map
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Land Potential	
Soils & Soil Suitability	

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LAND POTENTIAL STUDY AND SKETCH DEVELOPMENT PLAN

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I INTRODUCTION

Planning Efforts

Planning for a community or a county is a continuous decision making process using maximum foresight and available resources. Recognizing the need for continuous planning, the Chowan County Commissioners contracted with the North Carolina Department of Natural and Economic Resources, Division of Community Services in May, 1972, for technical assistance in preparing a comprehensive planning program. This work will be accomplished by the Chowan County Planning Board with technical assistance from the Division of Community Services staff by building upon the foundation laid from earlier planning work.

Previous planning efforts for Chowan County resulted in the following reports:

1962 - Overall Economic Development Program for Chowan County prepared by a joint Edenton-Chowan Planning Board

1969 - Comprehensive Area Wide Water and Sewer Planning Report prepared by J. N. Pease Associates, Charlotte, N. C.

1971 - Subdivision Regulations, Chowan County prepared by Chowan County Planning Board with technical assistance provided by Division of Community Services

1971 - Housing Element Update, Chowan County prepared by the Chowan County Planning Board with technical assistance provided by the Division of Community Services

1972 - The Potential for Outdoor Recreation, Chowan Co., prepared by Soil and Water Conservation Committee, Edenton, N. C.

The major elements of this contract include: land potential study, sketch development plan, community facilities plan, public improvement program and a zoning ordinance. The land potential study (this report) is a research study of the county to be used in formulating the Sketch Development Plan, which will serve as a guide for the long-range physical development of Chowan County. The

I. INTRODUCTION

Planning Process

Planning for a community or a county is a continuous decision making process based on sound foresight and adequate information. Recognizing the need for long-range planning, the Chowan County Commissioners contracted with the North Carolina Department of Natural and Economic Resources, Division of Community Services in May, 1972 for technical assistance in preparing a comprehensive planning program. This work will be accomplished by the Chowan County Planning Board with technical assistance from the Division of Community Services which is building upon the foundation laid from earlier planning work.

Previous planning efforts in Chowan County resulted in the following reports:

1966 - Overall Economic Development Program for Chowan County prepared by a local Planning (Chowan Planning Board)

1969 - Comprehensive Area Plan Edenton and Rocky Hock Planning Report prepared by [illegible] Associates, Charleston, S. C.

1972 - Population and Economy: Chowan County prepared by Chowan County Planning Board with technical assistance provided by Division of Community Services

1973 - Existing Land Use Survey: Chowan County prepared by the Chowan County Planning Board with technical assistance provided by the Division of Community Services

1973 - The Historical and Outdoor Recreation Plan, Chowan Co., prepared by [illegible] Conservation Consultants, Raleigh, N. C.

The major elements of this contract included: land potential study, development plan, community facilities plan, public improvement program and a zoning ordinance. The land potential study within this report is a research study of the county to be used in formulating the Ideal Development Plan, which will serve as a guide for the long-range physical development of Chowan County. The zoning ordinance along with the existing Chowan County Subdivision Regulations are two tools that will be used to implement the land development plan. The community facilities plan and public improvements program will discuss existing community facilities and itemize needed public improvements for the next twenty years.

Two recent projects of major importance in which the Chowan County Planning Board and Chowan County Commissioners have been involved in are: a joint Chowan-Perquimans County solid waste disposal system. This system recently funded with a grant and loan from Farmers' Home Administration will incorporate the use of one centrally located landfill and approximately 80 containers strategically located throughout the two counties. Also, Chowan County has begun taking positive steps towards the establishment of a county-wide water system. Rivers and Associates, Consulting Engineers, Greenville, N. C., have been retained for preparing preliminary engineering, feasibility and application information for the system. A county-wide water system was recommended by J. N. Pease and Associates in the study, Comprehensive Area Wide Water and Sewer Planning Report completed in 1969.

Historical Development

This is not an attempt to delve deep into the rich historical heritage of Edenton and Chowan County but, rather, to point out the significant role they played in the early development of the region and the nation.

Explorers from one of the initial expeditions of Sir Walter Raleigh entered the waters of the Chowan River in 1586. The area was inhabited by a colony of Indians known as the Chowanokes. Chowan Precinct, later to become Chowan County, was created by renaming several other precincts formed from Albemarle County in 1685. Edenton was incorporated in 1722 as the site for a courthouse

and named in honor of Governor Charles Eden. The present Chowan County Courthouse which is in use today, was built in 1767 and is one of the finest examples of Georgian architecture in the South. Today, this structure is a national historic landmark. The Town of Edenton and Chowan County became the focal point of the Albemarle region and for a time Edenton served as the "capitol" of the colony.[1]

Chowan County, having taken such an active part in history can claim with pride as the home of several notable leaders in the early American development of the State and Nation. Among those early American leaders are:

James Iredell - Attorney of North Carolina and Associate Justice U.S. Supreme Court, appointed by George Washington

James Iredell, Jr. - Governor of North Carolina

Joseph Hewes - Signer of Declaration of Independence

Samuel Johnson - Governor of North Carolina

Thomas Barker - Trained Samuel Johnson in law

Penelope Barker - Wife of Thomas Barker, leader of earliest known instance of political activity on the part of women in the American Colonies Edenton Tea Party, 1774.

A complete list of historic sites and locations appears in Appendix A of this report.

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[1] *Land Development Plan*, Edenton, N. C., N. C. Department of Conservation and Development, Division of Community Planning, Raleigh, N. C., 1968, p. 15.

II FACTORS INFLUENCING DEVELOPMENT

Regional Location

Chowan County is located in the northeast coastal plain of North Carolina. The county fronts on two bodies of navigable water, the Albemarle Sound to the south, and the Chowan River to the west. The county is 135 miles east of Raleigh, the State Capitol, and 45 miles southwest of Norfolk, Virginia. Edenton, the county seat is located in the southern portion of the county, on the Albemarle Sound.

The county is strategically located because of its proximity to the Norfolk Metropolitan area. If the relationship between this area and the county is properly utilized, there is every reason to believe Chowan County could have significant population growth and greater economic growth and development without sacrificing an outstanding living environment. A regional location map (Map I) appears on the following page.

The county possesses many natural amenities, such as favorable soils and climate which are conducive to good agriculture practices, recreation opportunities, and generally healthful living. Today, the county is developing many of the natural resources which attract industry and can make for a higher standard of living. Many of these factors will be pointed out in detail in other sections of the study.

Climate[2]

"The State Climatologist for the U. S. Environmental Science Services Administration reports that the Elizabeth City station serves as a good

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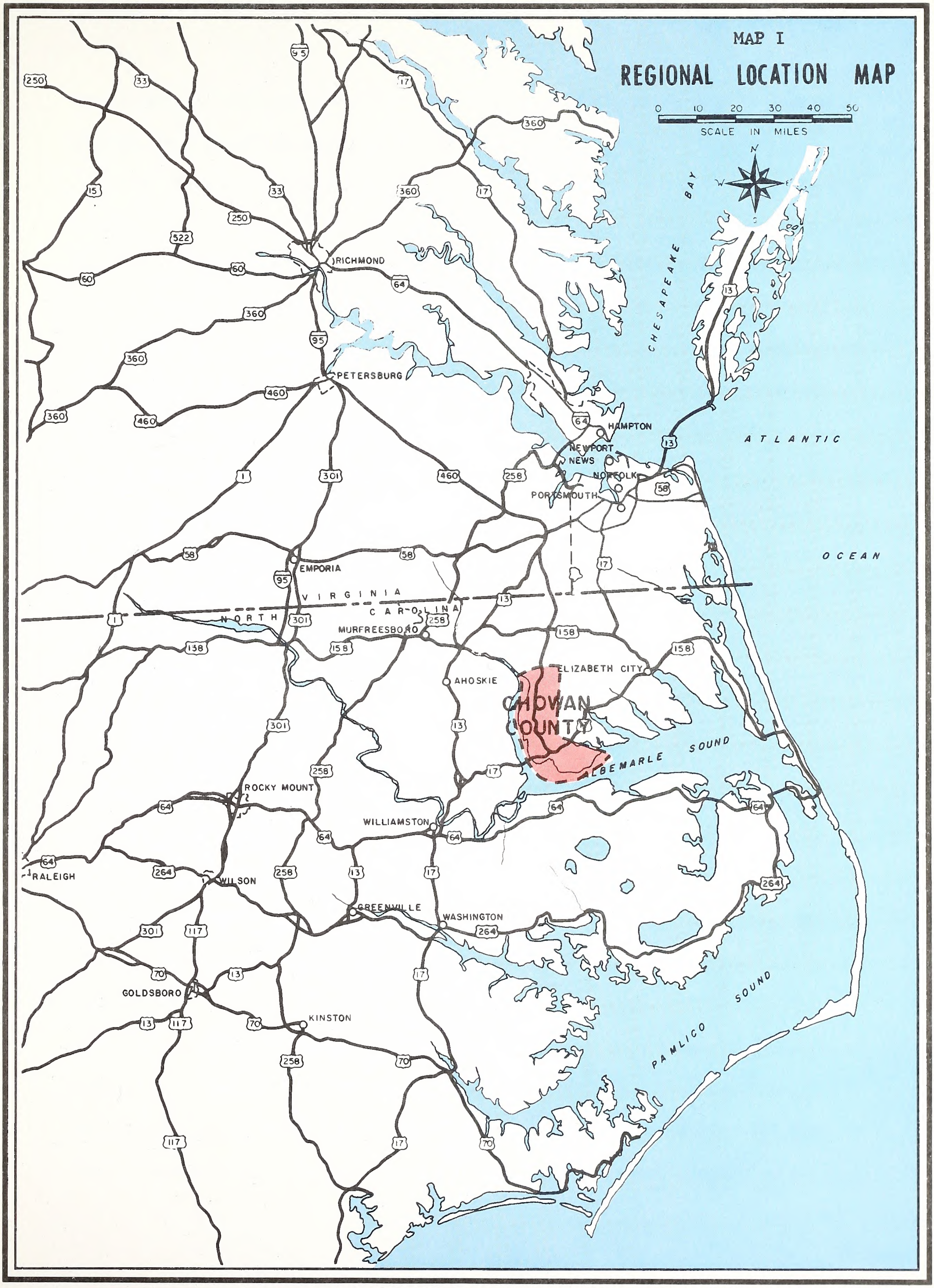
[2] Albert V. Hardy, "Climatological Summary" Elizabeth City, N. C. Station, U. S. Environmental Science Services Administration and N. C. S. U. Raleigh, N. C., 1965.



MAP I

REGIONAL LOCATION MAP

approximation for Chowan County. Thus, weather in Chowan County is generally similar to that of Elizabeth City some 30 miles northeast of Edenton.

The Elizabeth City area enjoys a moderate climate, with mild winters and warm summers. The nearness of the ocean and the large water areas of the Albemarle Sound has a moderating effect on temperatures, both winter and summer. This is pronounced when winds are blowing from northeast through southeast, but is of little consequence when offshore winds prevail. In the warm season, the cooling effect of the sea breeze is greatest in late spring and early summer, when coastal waters are still cool, but it still brings some moderation of high temperatures in July and August.

Temperatures drop below freezing in this area on a little less than half of the days in December, January, and February, but daytime temperatures almost invariably rise above 32 degrees. There is on the average, only one or two days per year on which the mercury remains below the freezing point throughout an entire day. Readings as high as 80 degrees can occur at any time of year, but are very rare in winter. Temperature as low as zero very rarely occurs.

Intermittent cool spells of several days duration occur through June, but the weather is usually quite warm during July and August. Although the average daily maximum temperature is nearly 90 degrees in July, extremes of heat are comparatively rare; on the average a reading of 100 degrees is reached on only one day per year and sometimes two or three years pass without any such occurrence.

The proximity of large bodies of water results in a longer growing season than is the case over inland areas of North Carolina. The average length of the freeze-free growing season in the Elizabeth City area is over 225 days. The average date of last occurrence in spring of a temperature as low as 32

degrees is March 27; of 28 degrees, March 12; of 20 degrees, February 12. The average date of first occurrence in fall of a temperature as low as 32 degrees is November 9; of 28 degrees, November 19; of 20 degrees, December 17.

Rainfall is usually ample and well-distributed throughout the year. Average rainfall is greatest during the summer months when the need for water to support crops and industry is greatest. The driest weather usually comes in the fall, at the harvest season. Winter rainfall comes from the effects of moving low pressure storm systems, resulting in intermittent rainy periods of from one to occasionally two or three days in length. Summer rains come principally in the form of brief showers and thunderstorms, which are seldom of more than a few hours duration. While there are occasional dry spells of several weeks in spring or summer, prolonged or severe drought during the growing season is very rare. A series of closely-spaced thundershowers or a storm moving northward in the coastal area will occasionally cause a period of excessive rainfall.

While there is an occasional snowfall in the Elizabeth City area, it is usually very light, often melting as it falls. Some snow falls during most winters, but no month receives an average of as much as two inches. Heavy snowstorms have occurred, but they are a rarity. Only very infrequently does any appreciable amount of snow remain on the ground more than a few days.

Winds blow more frequently from the southwest than any other direction during most of the year, but prevailing winds are from the northeast in autumn. The average speed of the wind is about eight or nine miles per hour. While the relative humidity varies considerably with the time of day; on an average it raises to 80 percent or a little higher in the early morning hours, dropping off steadily after sunrise and reaching 60 percent or lower at mid-afternoon.

More than half the daylight hours are sunny at all seasons, and in summer the sun shines, on the average, about two-thirds of the daytime period."

Drainage and Topography[3]

The most obvious relief features of Chowan County are the abundance of water surrounding the county and a level topographic surface with little elevation. For this reason Chowan County is included in the Atlantic Coastal Plain province of North Carolina. Generally the Coastal Plain is characterized by a relatively flat surface that slopes gently to the southeast. This nearly flat surface is composed of a number of terraces that were formed by wave and current action during periods when portions of the Coastal Plain were submerged beneath the sea. The terrace surfaces have been eroded and drained by streams and rivers since the sea retreated. Map II depicts drainage and topography of Chowan County.

Two such terraces, and the streams that dissect them, control the topographical features in Chowan County. Remnants of one of these terraces forms a topographic ridge between 30 and 50 feet above mean sea level that trends in a north-northeast direction across the county, along a line drawn between Emperor Landing, Tyner, and the northeastern tip of the county. This topographic feature widens from about half a mile at Valahalla to about four miles in the northeastern tip of the county. Stream density west of the ridge is relatively high. At the eastern limits of this ridge an escarpment of 20 to 30 feet is found. This escarpment makes the western extent of the second terrace in the county. The elevations on this second surface are generally

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[3] Ground-Water Resources of Chowan County, N. C. Department of Natural and Economic Resources, Office of Water and Air Resources, 1968, Raleigh, N. C.

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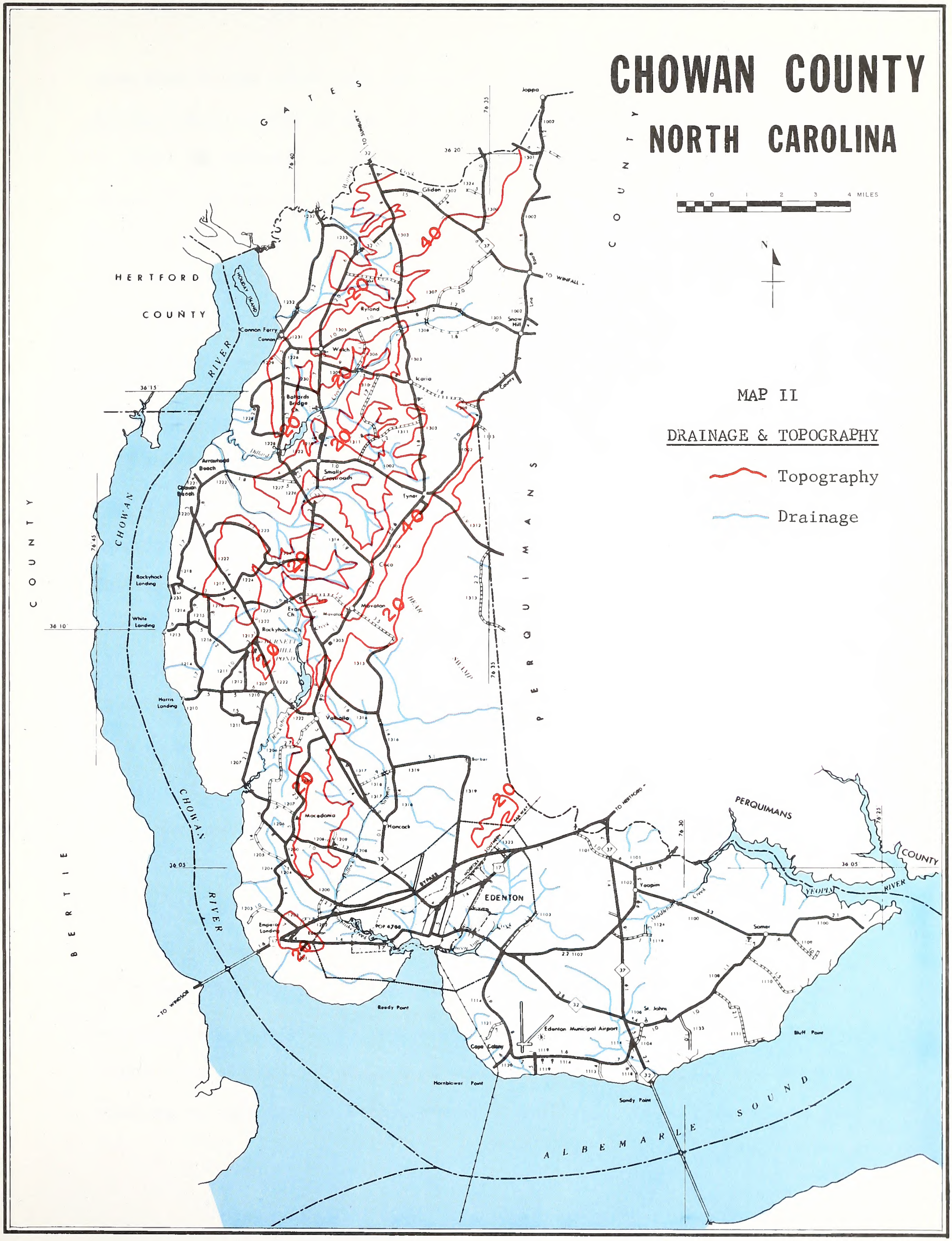
MAP II

DRAINAGE & TOPOGRAPHY



less than 20 feet above mean sea level, and the stream density on this surface is low. Much of this area is occupied by Bear Swamp.

All the drainage in the area is divided by the topographic ridge that transects the county. Streams to the west of the ridge, Warwick Creek, Dillard Creek, and Rockyhock Creek flow west or south to the Chowan River and Albemarle Sound. Streams to the east of the ridge, Pollock Swamp-Pembroke Creek, Queen Anne Creek and Burnt Mill Creek-Yeopim River, flow south and east to the Albemarle Sound.

Geology and Ground Water

An understanding of the geology of the area is the first step toward evaluating the availability, occurrence, and chemical quality of the ground water in the county. This is true because the void spaces between the rock materials that underlie Chowan County constitute the reservoir in which the water is stored and the conduits through which the water moves. Since a thorough examination of the geology and ground water has already been undertaken, it is the purpose of this section to merely summarize the conclusions from an earlier study entitled Ground Water Resources of Chowan County, N. C. Herein are the conclusions of that study.

"The sedimentary formations that underlie Chowan County range from Early Cretaceous to post-Miocene in age, and are composed of interbedded sand, silt, clay, shell, and limestone beds that are saturated with water.

The sediments between land surface and about 450 feet below contain fresh water and can be divided into five aquifers (A, B, C, D, and E) that are generally separated by four acquicludes. Maps III and IV illustrate, approximate attitude of the top of acquifer B and C; D and E. Aquifer A is composed of very fine to medium-grained quartz sand that occurs between land

surface and about 25 feet below land surface. The top and bottom of this aquifer at any one place is marked by the water table and the deepest occurrence of the surficial sands, respectively. The ground water in Aquifer A is under non-artesian or water-table conditions. Yields from dug, bored, and driven wells screened in this aquifer are usually less than 10 gpm. Water from this zone generally contains more than 0.3 ppm iron, but other dissolved minerals constituents are usually below the maximums recommended by the U.S. Public Health Service.

Aquifer B is composed of fine to course-grained quartz sand and shell beds. The top of this zone occurs at approximately 30 feet and the bottom occurs at about 80 feet below land surface. Water in Aquifer B is generally under semi-artesian conditions. Bored, driven and drilled naturally-developed and gravel-packed wells are used to recover water from Aquifer B. The specific capacity of properly constructed, naturally-developed wells screening the full thickness of this aquifer should be about 3 gpm per foot of drawdown. Concentrations of iron in water from this zone are generally above 0.3 ppm, and the water is usually very hard in the southern and southeastern part of the county.

Aquifer C is composed of sandy-shell limestone, glauconitic sand, and sandy limestone and phosphatic quartz sand. The top of this water-bearing zone occurs at about 150 feet and the bottom occurs at about 190 feet below land surface in the western part of the county, and these depths increase about 10 feet per mile toward the east. The water in Aquifer C is under artesian conditions. Drilled open-end, naturally developed, and gravel-packed wells are used to recover ground water from this aquifer. In the southern part of the county the specific capacity of gravel-packed or naturally developed, properly constructed wells screening the full thickness of Aquifer C

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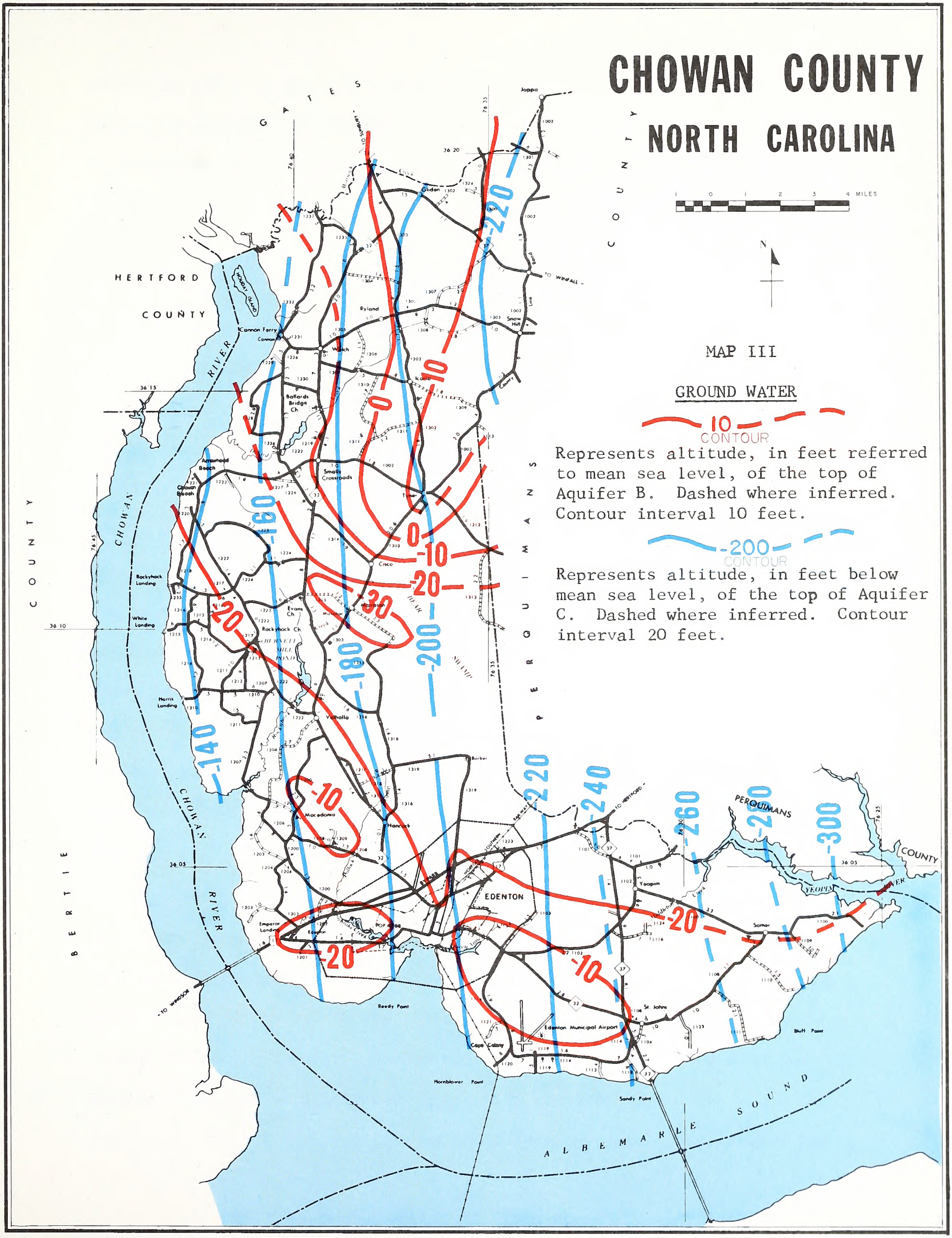

MAP III

GROUND WATER

10 CONTOUR

Represents altitude, in feet referred to mean sea level, of the top of Aquifer B. Dashed where inferred. Contour interval 10 feet.

-200 CONTOUR

Represents altitude, in feet below mean sea level, of the top of Aquifer C. Dashed where inferred. Contour interval 20 feet.

should be about 16 gpm per foot drawdown. The specific capacities of wells screening Aquifer C in the central and northern part of the county will be much less because the Castle Hayne Limestone is absent and the general lithic texture of the aquifer is much finer in these areas. Water from Aquifer C is very hard in the vicinity of Edenton, and where hardness is below 180 ppm, concentrations of dissolved iron generally exceed 0.3 ppm. Concentrations of chloride in this water exceed 250 ppm in the northern half and the southeastern part of the county.

Aquifer D is composed of interbedded fine to medium-grained quartz, sand, glauconite, and glavconitic and sandy limestone. The top of Aquifer D occurs at about 220 feet and the bottom occurs at about 270 feet below land surface in the western part of the area, and these depths increase about 12 feet per mile toward the east. Drilled open-end and naturally developed wells are used to recover water from this aquifer. Water contained by Aquifer D is under artesian conditions. The specific capacity for properly constructed, naturally-developed wells screening the full thickness of Aquifer D should be about 5 gpm per foot of drawdown. Concentrations of chloride in water from this aquifer are below 250 ppm only in the central western part of the county and, locally the water is very hard, contains more than 0.3 ppm iron, and more than 1.5 ppm fluoride.

Aquifer E consists of interbedded fine-to-medium-grained quartz sand, shell, and clay layers. The top of this water-bearing zone occurs at about 320 feet and the bottom occurs at about 420 feet below land surface in the western part of the county and these depths increase about 25 feet per mile toward the east-southeast. Ground water in Aquifer E is under artesian conditions. Drilled naturally-developed wells are used to recover water from Aquifer E. Yields from wells screened in this zone are exceptionally low

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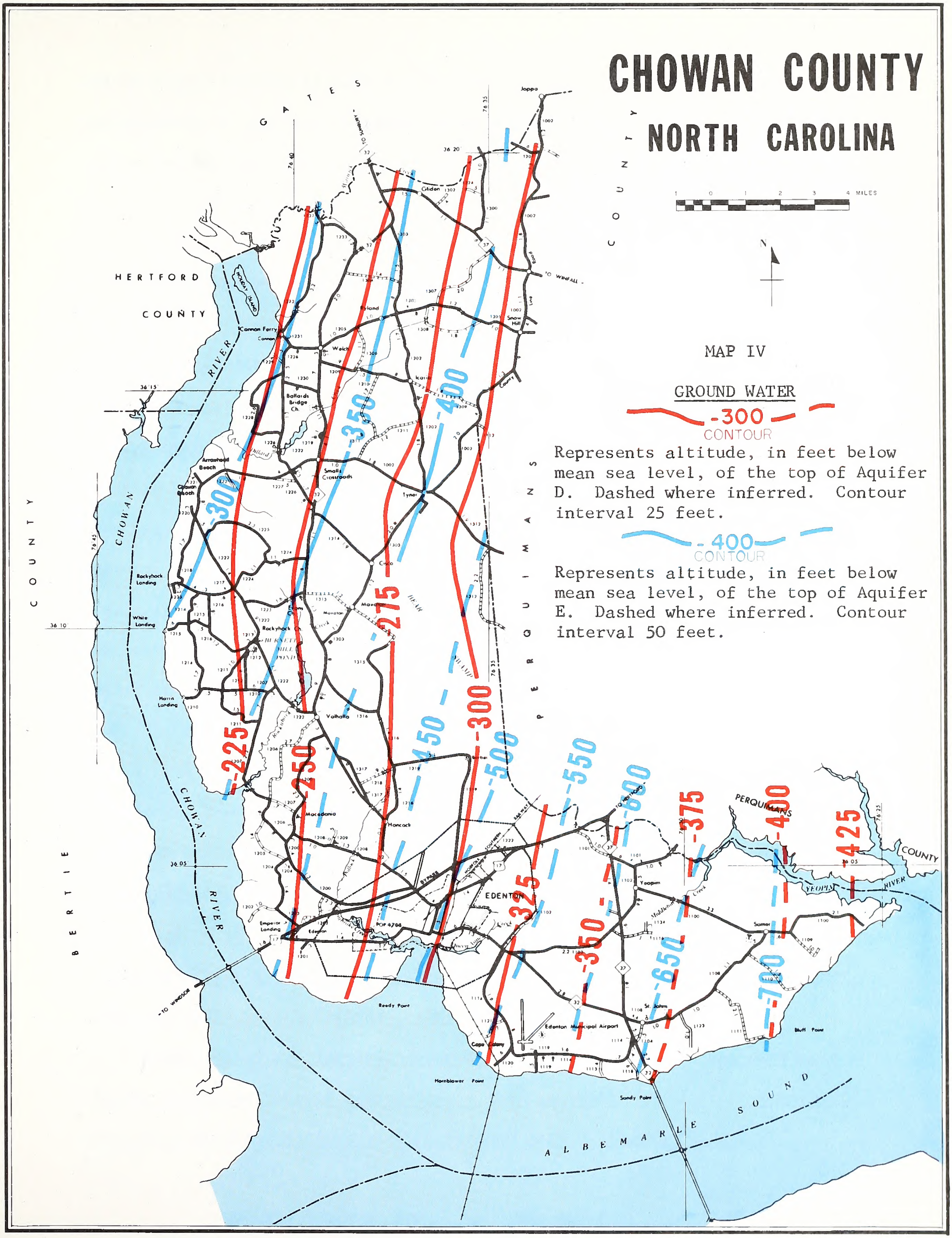

MAP IV

GROUND WATER

-300 CONTOUR

Represents altitude, in feet below mean sea level, of the top of Aquifer D. Dashed where inferred. Contour interval 25 feet.

-400 CONTOUR

Represents altitude, in feet below mean sea level, of the top of Aquifer E. Dashed where inferred. Contour interval 50 feet.

(1 to 5 gpm) for the texture of the sands in this aquifer, and could probably be improved if electric or gamma-ray well logs were used to determine screen depths during well construction. Where the water from this aquifer contains less than 250 ppm chloride (in a small area north of Rocky Hock and generally west of Smalls Cross Roads), other dissolved constituents are usually below the maximum concentrations recommended by the U.S. Public Health Service.

Rainfall recharges the aquifers with ground water. More recharge occurs during the winter and early spring months than any other time of the year, because evapotranspiration rates are low. Water levels generally rise during this period. Most of the ground water recharge occurs in the elevated topographic areas in the county where the piezometric surfaces and the water table are high. The water moves away from these recharge areas toward areas of natural and artificial discharge where the piezometric surfaces and the water table are low. Discharge usually exceeds recharge in the late spring, summer, and early fall months, because of high evapotranspiration rates. Therefore, water levels are generally lowest during this time of year.

The distribution of chloride concentrations in water in Aquifers C, D, and E (the increase in chloride from west to east in the area) was established before the present drainage system was developed, when major recharge to these aquifers was occurring west of Chowan County. Since the development of the present drainage system, major recharge to the artesian aquifers in the county has occurred in the northern and northeastern part of the area, and water containing high concentrations of chloride is now being diluted and flushed from the north toward the east, south, and west.

Concentrated and increasing pumpage in the Edenton area has developed a rather extensive cone of depression in the piezometric surface of Aquifer C, the major artesian aquifer in the southern part of Chowan County.

This cone of depression is expanding, and will continue to expand as long as pumping increases, and has already intercepted areas southeast of Edenton where the water in Aquifer C contains excessive concentrations of chloride."[4]

Furthermore, the lowering of the water levels will eventually limit the availability of water at some places, and will cause a continuing increase in the cost of pumping water. Unless management measures are implemented that will retard or prevent it much of the area will eventually result in significant encroachment of salt water into the fresh water reservoirs.

Commenting further on the ground water supply of Chowan County the J. N. Pease Study reports, "Chowan County has access to ample ground-water supplies. However, the quality of the readily available ground water is less than desirable. There are no surface water supplies of suitable quality for development. The Town of Edenton and the abandoned Marine Corps Air Base have community systems with the supply obtained from wells. Softening is included in the treatment process."

The water supply of Edenton is from three wells, two with a total capacity of 600 gallons per minute and the newest well capable of pumping 500 gallons per minute. Water is stored in two elevated tanks, one has a capacity of 0.3 million gallons and the newest tank can accommodate 0.5 million gallons.

The abandoned air base supply is owned by the Aqua Water Company having its principal office in Wilmington, N. C. The company supplies water to some 300 customers in the area of the airport and to Cape Colony, a private residential subdivision. The air base water system has 2 well pumps with a 350 gpm capacity and a 0.25 million gallon ground reservoir storage tank and a 150,000 gallon elevated storage tank.

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[4] Ground-Water Resources of Chowan County, N. C. Department of Natural and Economic Resources, Office of Water and Air Resources, 1968, Raleigh, N. C., page 96.

Open Space

As the Albemarle Region becomes urbanized, open space becomes a precious natural resource. Chowan County along with other counties in the region is fortunate to have a vast amount of open space. Open space is an asset for future development, therefore, it should be protected and utilized properly. Superficially, open space is often associated with the lack of development. However, in the case of Chowan County, income is being derived from it with the production of agriculture products and timber. The two most important economic characteristics of Chowan County's open space is agriculture and forestry.

Chowan County, the smallest county in the state, comprises 149,800 acres including land and water. As expected, the two major categories of land are forestry and agriculture with approximately 67,000 and 39,000 acres, respectively.[5] The significance of forest cover becomes more apparent when one considers that roughly 60 percent of the land in Chowan County is covered with trees and natural vegetation. While a considerable amount of this land contains bogs and wooded swamps such as Bear Swamp, nevertheless, they are critical factors in terms of wildlife resources and natural areas.

Chowan County is no different from most counties of the Albemarle Region in having a proportionately large amount of open space. There are characteristics of Chowan's open space which lend it more in terms of potential for future development. This uniqueness is a combination of factors, including:

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[5] N. C. Agriculture Extension Service, Impact 76, Chowan County, January, 1972, p. 3.

-- The characteristics of the county's water resources, forest cover, and scenic and historic sites;

-- Its geographical location and proximity to the Norfolk Metropolitan Area needing recreation, retirement, and expansion room;

-- The variety of potential land development suitable for residential, agriculture, recreation, tourism, and industrial uses in various locations.

Soils[6]

The soils of an area will greatly determine the extent of present development and the suitability for future growth. Unless an area has the proper soils, progress cannot be made in agriculture, urban development, and construction. In general, the soils of Chowan County are rock free as a result of sedimentary deposits that underlay them for several hundred feet. Consequently, the soils are excellent for growing field crops and depending on location, generally favorable for various types of construction.

Soils are classified by the U. S. Soil Conservation Service according to capability. Eight classes exist, however, seven classes are used to classify land in Chowan County. These are as follows:

Class I - Very good land, well drained, nearly level, productive land with no special conservation problems.

Class II - Gently sloping to level land, productive, with a moderate erosion problem or may require some drainage.

Class III - Moderately good land that can be cultivated safely with such intensive treatments as terracing and strip cropping, along with measures like crop rotation, cover crops, fertilizing, water management, etc. Usually subject to moderate to severe erosion.

Class IV - Land that is either wet, flat land difficult to drain or droughty, deep sandy land with a severe fertility problem.

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[6] Mr. Joe Covington, Area Soil Scientist, U. S. Department of Agriculture, Soil Conservation Service, Edenton, N. C.

Class V - Nearly level, wet land which is not suitable for cultivation but is suitable for unrestricted grazing and forage production.

Class VI - Shallow land unsuited for cultivation. Best used for pasture or trees.

Class VII - Swampy or sandy land, best suited for trees.

Class VIII - Non-agriculture land such as marshland or sand dunes.

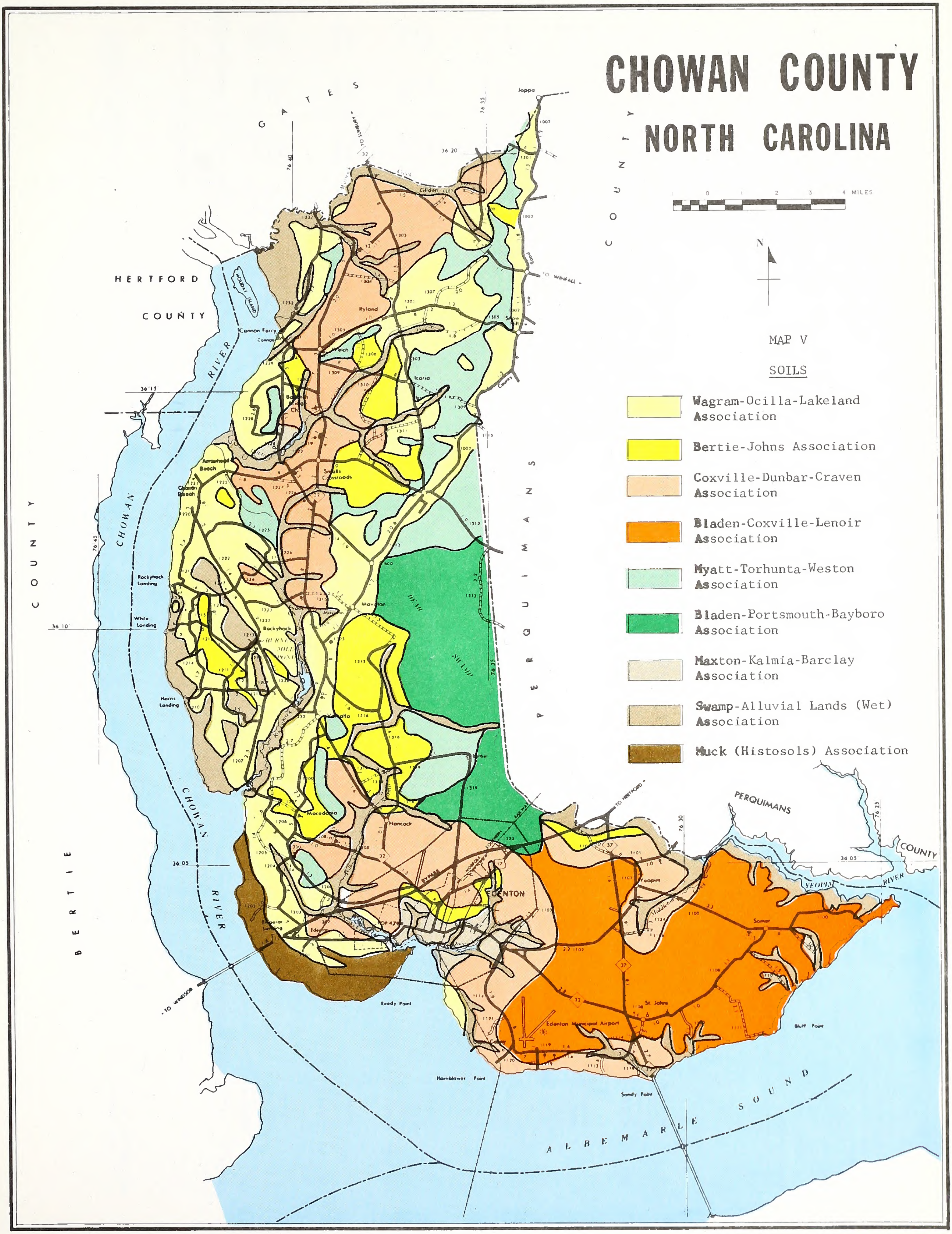
Soils occurring together in a characteristic and repeating pattern constitute a general soil area or soil association. An association consists of two or more principal soils and at least one minor soil which may be quite similar to or quite different from each other. Although closely associated geographically, the soils in an association may differ in their suitability for agricultural and non-farm use.

A General Soil Map (Map V) appears on the following page which shows the location and extent of the nine soil associations in Chowan County. Such a map provides the general soils data needed to plan the efficient use and orderly development of the county's soil resources. The general soil map is useful for (1) those who want a general idea of the soils, (2) those who want to compare the potential of different parts of the county, or (3) those who seek the location of areas suitable for specific types of farming or other land use. It is not designed to show accurately the kinds of soil on a single farm or individual tract of land and is not suitable for planning such units of land.

In addition, immediately following the General Soil Map is a soil interpretative table giving the suitability of the principal soils for general agriculture and woodland. It also gives their limitations for non-farm uses, such as septic tank absorption fields, foundations for light industry or recreation areas.

The nine soil associations as mapped in Chowan County are described as follows:

CHOWAN COUNTY
NORTH CAROLINA



MAP V

SOILS

- Wagram-Ocilla-Lakeland Association
- Bertie-Johns Association
- Coxville-Dunbar-Craven Association
- Bladen-Coxville-Lenoir Association
- Myatt-Torhunta-Weston Association
- Bladen-Portsmouth-Bayboro Association
- Maxton-Kalmia-Barclay Association
- Swamp-Alluvial Lands (Wet) Association
- Muck (Histosols) Association

N. C. Trial Form (7/70)
Raleigh, N. C.

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Soil Interpretations
General Soil Map
CHOWAN COUNTY, NORTH CAROLINA

				LIMITATIONS FOR							SUITABILITY FOR			
				Dwellings with		Recreation								
% of County		Soil Associations	% in Assoc.	Sewerage Systems	Septic Tank Filter Fields	Camp Sites	Picnic Areas	Intensive Play Areas	Light Industries 1/	Roads and Streets 2/	General Agriculture 3/	General Agriculture 4/	Woods	Pasture
33%	1.	WAGRAM-OCILLA-LAKELAND												
		Wagram	50%	Slight	Slight	Mod.Traf	Mod.Traf	Mod.Traf	Slight	Slight	Good	Good	Good	Fair
		Ocilla	20%	Mod.WT	Sev.WT	Mod.WT	Mod.WT Traf	Mod.Traf.WT	Mod. WT.Traf	Mod.WT.TSC	Good	Fair	Good	Fair
		Lakeland	20%	Slight	Mod.Perc	Sev.,Sand	Sev.,Sand	Sev.,Sand	Mod.BR-STG	Slight	Fair	Poor	Poor	Poor
7%	2.	BERTIE-JOHNS												
		Bertie	45%	Mod.WT	Mod.WT	Mod.WT Traf	Mod.WT Traf	Mod.WT Traf	Mod.WT.Traf	Mod.WT.TSC	Fair	Good	Good	Good
		Johns	35%	Mod.WT	Mod.WT	Mod.Traf	Mod.Traf	Mod.Traf	Mod.Traf	Mod.TSC	Fair	Fair	Fair	Fair
27%	3.	COXVILLE-DUNBAR-CRAVEN												
		Coxville	50%	Sev.WT Fl	Sev.Perc.Fl.WT	Sev.Fl.WT.Traf	Sev.Fl.WT.Traf	Sev.Fl.WT.Traf	Sev.Fl.WT.Cor	Sev.WT.Fl.TSC	Fair	Good	Good	Good
		Dunbar	25%	Mod.Fl.WT	Sev.WT.Perc	Mod.WT.Traf	Mod.WT.Traf	Mod.WT.Traf	Mod. Sh-Sw	Mod.WT.TSC	Fair	Good	Good	Good
		Craven	10%	Mod.Sh-Sw	Sev.Perc	Mod.ER.Traf.Sl	Mod.Traf	Mod.Traf	Mod.Cor.Sh-Sw Sl.	Sev.TSC	Fair	Good	Fair	Good
14%	4.	BLADEN-COXVILLE-LENOIR							Sh-Sw					
		Bladen	60%	Sev.WT.Fl	Sev.Fl.Perc.WT	Sev.Fl.Traf.WT	Sev.Fl.WT.Traf	Sev.Fl.WT.Traf	Sev.Cor.WT.Fl.	Sev.Fl.WT.TSC	Poor	Good	Good	Good
		Coxville	15%	Sev.WT.Fl	Sev.Perc.Fl.WT	Sev.Fl.WT.Traf	Sev.Fl.WT.Traf	Sev.Fl.WT.Traf	Sev.Fl.WT.Cor.	Sev.WT.Fl.TSC	Fair	Good	Good	Good
		Lenoir	15%	Sev.Fl	Sev.Perc.WT.Fl	Sev.Traf	Sev.Traf.WT	Sev.Traf.WT	Sev.Fl.WT.Cor. Sh-Sw	Sev.TSC	Fair	Good	Good	Good
6%	5.	MYATT-TORHUNTA-WESTON												
		Myatt	40%	Sev.Fl.WT	Sev.Fl.WT.Perc	Sev.Fl.Traf	Sev.Fl.Traf	Sev.Fl.Traf	Sev.Fl.WT.Cor	Sev.Fl.WT	Fair	Good	Good	Good
		Torhunta	30%	Sev.Fl.WT	Sev.Fl.WT	Sev.Traf.Fl	Sev.Traf.Fl	Sev.Fl.Traf	Sev.Fl.WT.Cor.	Sev.WT.Fl	Poor	Good	Good	Good
		Weston	10%	Sev.Fl.WT	Sev.Fl.WT	Sev.Fl.WT.Traf	Sev.Fl.WT.Traf	Sev.WT.Fl.Traf	Sev.Fl.WT.Cor.	Sev.Fl.WT	Fair	Fair	Good	Good
8%	6.	BLADEN-PORTSMOUTH-BAYBORO							Sh-Sw					
		Bladen	45%	Sev.WT.Fl	Sev.Perc.WT.Fl	Sev.Fl.Traf.WT	Sev.Fl.WT.Traf	Sev.Fl.WT.Traf	Sev.Cor.WT.Fl	Sev.Fl.WT.TSC	Poor	Good	Good	Good
		Portsmouth	30%	Sev.Fl.WT	Sev.Fl.WT	Sev.Traf.Fl	Sev.Traf.Fl	Sev.Fl.Traf	Sev.Fl.WT.Cor	Sev.WT.Fl	Poor	Good	Good	Good
		Bayboro	15%	Sev.Cor.WT.Fl Sh-Sw	Sev.Perc.Fl. WT.Sh-Sw	Sev.WT.Fl.Traf	Sev.Fl.WT.Traf	SevFl.WT. Traf	Sev.Fl.WT.Cor. Sh-Sw	Sev.Fl.WT.TSC	Poor	Good	Good	Good
				Slopes >10% impose limitations; 10-25% - Mod.; 25%+ - Sev.	Slopes >10% impose limitations; 10-15% - Mod.; 15%+ - Sev.	Slopes >6% impose limitations; 6-10% - Mod.; 10%+ - Sev.	Slopes >10% impose limitations; 10-25% - Mod.; 25%+ - Sev.	Slopes > 6% impose limitations; 6-10% - Mod.; 10%+ - Sev.	Slopes >10% impose sev. limitations	Slopes > 25% impose sev. limitations				

Abbreviations for Limiting Factors:

Fl - Flood hazard
Wt - Water Table
Traf - Trafficability
Sh-Sw - Shrink-swell potential
R- Rock
Perc - Percolation rate
Cor - Corrosion potential
BR-STG - Bearing Strength

TSC- Traffic supporting capacity
Prod - Productivity
AWC - Available water capacity
Sl- Slope
ER - Erosion

Abbreviations for degree of limitations:

Slt. - Slight ; Mod. - Moderate ; Sev. - Severe

3/ Tobacco, peanuts
4/ Corn, soybeans, small grain

1/ Structures whose footings are in subsoil.

2/ Refers to roads and streets that have subsoil

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N. C. Trial Form (7/70)
Raleigh, N. C.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Soil Interpretations
General Soil Map
CHOWAN COUNTY, NORTH CAROLINA

				LIMITATIONS FOR							SUITABILITY FOR			
				Dwellings with		Recreation								
% of County		Soil Associations	% in Assoc.	Sewerage Systems	Septic Tank Filter Fields	Camp Sites	Picnic Areas	Intensive Play Areas	Light Industries 1/	Roads and Streets 2/	General Agriculture 3/	4/	Woods	Pasture
1%	7.	MAXTON-KALMIA-BARCLAY												
		Maxton	40%	Slight	Slight	Slight	Slight	Slight	Slight	Slight	Good	Good	Good	Good
		Kalmia	25%	Slight	Slight	Slight	Slight	Slight	Slight	Slight	Good	Good	Good	Good
		Barclay	15%	Mod.WT	Mod.WT.	Mod.Traf.	Mod.Traf.	Mod.Traf.	Mod.TSC	Slight	Good	Good	Good	Good
3%	8.	SWAMP-ALLUVIAL LAND (WET)												
		Swamps	55%	Sev.Fl.WT	Sev.Fl.WT	Sev.Fl.WT.Traf	Sev.Fl.WT.Traf	Sev.Cor.WT.Fl	Sev.Fl.WT.Traf	Sev.Fl.WT.TSC	Poor	Poor	Poor	Poor
		Alluvial land (wet)	35%	Sev.Fl.WT	Sev.Fl.WT	Sev.Fl.WT.Traf	Sev.Fl.Wt.Traf	Sev.Cor.WT.Fl	Sev.Fl.WT.Traf	Sev.Fl.WT.TSC	Poor	Poor	Fair	Poor
1%	9.	MUCK (HISTOSOLS)												
		Muck	85%	Sev.Fl.WT	Sev.Fl.WT	Sev.Fl.WT.Traf	Sev.Fl.WT.Traf	Sev.Cor.WT.Fl	Sev.Fl.WT.Traf	Sev.Fl.WT.TSC	Poor	Good	Fair	Fair
				Slopes ≥ 10% impose limitations; 10-25% - Mod.; 25%+ - Sev.	Slopes ≥ 10% impose limitations; 10-15% - Mod.; 15%+ - Sev.	Slopes ≥ 6% impose limitations; 6-10% - Mod.; 10%+ - Sev.	Slopes ≥10% impose limitations; 10-25% - Mod.; 25%+ - Sev.	Slopes > 6% impose limitations; 6-10% - Mod.; 10%+ - Sev.	Slopes ≥ 10% impose sev. limitations	Slopes >25% impose sev. limitations				

DEFINITIONS OF SOIL LIMITATIONS

None to Slight	Soils have properties favorable for the rated use. Limitations are so minor that they can be easily overcome. Good performance and low maintenance can be expected from these soils.
Moderate	Soils have properties moderately favorable for the rated use. Limitations can be overcome or modified with planning, design, or special maintenance.
Severe	Soils have one or more properties unfavorable for the rated use. Limitations are difficult and costly to modify or overcome, requiring major soil reclamation, special design, or intense maintenance.

Abbreviations for Limiting Factors:

Fl - Flood hazard
Wt - Water Table
Traf - Trafficability
Sh-Sw - Shrink-swell potential
R- Rock
Perc - Percolation rate
Cor - Corrosion potential

TSC- Traffic supporting capacity
Prod - Productivity
AWC - Available water capacity

Abbreviations for degree of limitations:

Slt. - Slight ; Mod. - Moderate ; Sev. - Severe

1/ Structures whose footings are in subsoil.

2/ Refers to roads and streets that have subsoil

1. WAGRAM-OCILLA-LAKELAND ASSOCIATION

Well drained to somewhat poorly drained soils with thick, gray sandy surfaces and friable, reddish brown sand, sandy clay loam or mottled gray and yellow sandy clay loam subsoils.

This association, approximately 33 percent of the county's total acreage, comprises the largest acreage of all the various associations. It occurs as extensive areas in the southeast, central, and as a continuous band from the central portions at Valhalla northeastward along the Perquimans-Chowan County line and on into Gates County.

The Wagram series make up approximately 50 percent of the association. They are well drained soils with thick, (20-40 inch) gray sandy surface layers and friable reddish brown sandy clay loam subsoils.

The Ocilla series make up approximately 20 percent of the association. They are moderately well and somewhat poorly drained soils with gray to dark grayish brown loamy sand surface layers, 20-40 inches thick. The subsoils are friable, yellow to brownish yellow sandy clay loam to sandy loam with grayish mottles within 30 inches of the surface.

The Lakeland series also make up approximately 20 percent of the association. These soils have grayish brown thick sand surface layers and brownish yellow to pale yellow, loose fine sand or coarse sand subsurface layers. This member of the association occurs primarily in the east central edge of the county between White's Landing and Cannon Ferry.

The remaining 10 percent of this association is composed of small areas of other soils.

Most of the association is in cultivation and the rest is chiefly in woodland. The woods are on the less well drained and wetter minor soils in the association. Approximately 1 percent is Class I land, 50 percent is

Class II, 30 percent is Class III, and approximately 20 percent is Class IV land.

With the exception of the Lakeland soils, this association contains some of the most highly prized truck, tobacco and peanut land in the entire area.

The Wagram and Ocilla members have slight to moderate limitations for non-farm use while the Lakeland soils have moderate to severe limitations because of the sand. The sandy nature provides little or no filter action in relation to septic tank filter fields and causes severe trafficability problems for picnic areas, playgrounds, etc.

2. BERTIE-JOHNS ASSOCIATION

Moderately well to somewhat poorly drained soils with shallow solums having gray sandy loam surfaces and friable to firm, mottled yellow and gray sandy loam and sandy loam subsoils.

This association comprises approximately 7 percent of the County's total acreage. It occurs as large areas in the central, eastern and north central portions of the County. A fairly large area also occurs just north of Edenton.

The Bertie series make up approximately 45 percent of the association. They are somewhat poorly drained soils with gray sandy loam surface layers and mottled gray and yellow, friable to firm, sandy clay loam subsoils.

The Johns series make up approximately 35 percent of the association. They are moderately well to somewhat poorly drained soils with gray to brownish gray surface layers over friable, yellow, mottled yellow and gray sandy loam to sandy clay loams which are underlain by a sand substrata at approximately 36 inches.

The remaining 20 percent of the association consists of small areas of other soils.

About one-half of the area is in cultivation and the rest is chiefly in urban and residential uses and woodland. Approximately 60 percent of the association is Class II land, 35 percent is Class III and the remainder is Class IV.

The principal soils in this association have slight to moderate limitations for both agriculture and non-farm use.

3. COXVILLE-DUNBAR-CRAVEN ASSOCIATION

Moderately well to poorly drained soils with thick solums having gray sandy loam surfaces and firm to very firm yellow, mottled gray and yellow, clay subsoils.

This association comprises approximately 27 percent of the County's total acreage and represents the second largest association. It occurs as two large areas in the southern part of the County and also as a large continuous strip in the central and northern part beginning slightly south of Evans Cross Roads on N. C. #32 North.

The Coxville series make up approximately 50 percent of the association. They are poorly drained soils with gray sandy loam surfaces and thick, firm sandy clay or heavy clay loam subsoils.

The Dunbar series make up approximately 25 percent of the association. They are somewhat poorly drained soils with gray to dark gray sandy loam surfaces over thick, firm, mottled yellow and gray clay loam or clay subsoils.

The Craven series make up approximately 10 percent of the association. They are moderately well drained soils with gray sandy loam surfaces over thick, very firm, yellow clay subsoils which have gray mottlings approximately 24 inches from the surface. These soils generally occur on the higher elevations or slopes bordering the larger drainage patterns.

The remaining 15 percent of the association is composed of other soils.

Most of the association is in cultivation, and is used for such crops as corn, soybeans, small grain, peanuts, tobacco and some truck. The remainder is in woodland and urban development. The soils in this association produce good to excellent stands of timber.

Approximately 20 percent is Class II land, 70 percent is Class III and the remainder is Class IV and V.

The Coxville soils have severe limitations for non-farm use because of high water tables, flooding and slow permeability. Primarily, the Dunbar and Craven soils have moderate limitations for non-farm use, although some small areas of Craven may have severe limitations because of slope and erosion.

4. BLADEN-COXVILLE-LENOIR ASSOCIATION

Somewhat poorly to poorly drained soils with thick solums having gray to dark gray sandy loam surfaces and firm to very firm, thick gray, mottled gray and yellow clay subsoils.

This association comprises approximately 14 percent of the county's total acreage. It occurs as a large continuous body of land in the extreme southern tip of the county.

The Bladen series make up approximately 60 percent of the association. They are poorly drained soils having gray or dark gray sandy loam or slit loam surface layers over thick, very firm, gray or dark gray mottled with yellow and/or red, sticky, plastic, clay subsoils.

The Coxville series make up approximately 15 percent of the association. They are poorly drained soils with gray sandy loam surface layers and thick, firm, sandy clay or heavy clay loam subsoils.

The Lenoir series make up approximately 15 percent of the association.

They are somewhat poorly drained soils with gray to dark gray sandy loam or very fine sandy loam surface layers over thick, very firm, mottled yellow and gray clay subsoils.

The remaining 10 percent of the association is made up of small areas of other soils.

Most of the association is in timber. The remainder is in cultivation with a small area in commercial use as an airport. The soils in this association will produce excellent stands of timber. They will also produce good yields of corn and soybeans when adequately treated and managed. Approximately 1 percent of the area is Class II land, 97 percent is Class III land the remainder is Class IV land.

The soils in this association have severe limitations for non-farm use because of high water tables, flooding, and slow permeability.

5. MYATT-TORHUNTA-WESTON ASSOCIATION

Poorly to very poorly drained soils with relatively thin solums having friable, gray to black loam or sandy loam surfaces and friable to firm, mottled gray, very dark gray and yellow clay loam to sandy loam subsoils.

This association comprises approximately 6 percent of the County's total acreage. It occurs principally in the northeastern part of the County, although one fairly large area is located several miles north of Edenton. Smaller areas also occur in the south central part and north of Rocky Hock section.

The Myatt series make up approximately 40 percent of the association. They are poorly drained soils with gray to dark gray sandy loam surfaces over moderately thick, firm, mottled gray and yellow sandy clay loam subsoils. They are generally underlain by a course sandy substratum at approximately 44 inches.

The Torhunta series make up approximately 30 percent of the association. They are very poorly drained soils with relatively thick, black loam surface layers over thin, friable, dark gray to very dark gray, sticky, plastic, sandy loam subsoils which are underlain by a gray sandy substratum at approximately 40 inches.

The Western series make up approximately 10 percent of the association. They are poorly drained soils with gray to dark gray, fine sandy loam or loamy fine sand surfaces over thin, friable, mottled gray and yellow sandy loams which are underlain by stratified layers of sand, silt and some clay.

The remaining 20 percent of the association is made up of other soils.

Most of the acreage of this association is in woodland and the rest is chiefly cultivated. Practically all of the area is Class III land but a few acres are Class IV land.

Although crops grown on the soils in this association respond to proper treatment and good management the feasibility of bringing them into cultivation is questionable at present. Drainage is a prime factor and in may instances it is extremely difficult to obtain adequate outlets.

The soils of this association have severe limitations for non-farm use because of flooding and high water tables.

6. BLADEN-PORTSMOUTH-BAYBORO ASSOCIATION

Poorly drained to very poorly drained soils with thick solums having dark gray to black very fine sandy loam or loam surfaces and firm to very firm, mottled gray, very dark gray, yellow and red, sticky clay loam to clay subsoils.

This association comprises approximately 8 percent of the County's total acreage. It occurs as a single, but extensive area in the east central portion

along the Chowan-Perquimans County line.

The Bladen series make up approximately 45 percent of the association. They are poorly drained soils with dark gray sandy loam or silt loam surface layers over thick, very firm, dark gray mottled with yellow and red, clay subsoils which are sticky and plastic.

The Portsmouth series make up approximately 30 percent of the association. They are very poorly drained soils with black loam surface layers over friable, mottled very dark gray, yellow and yellowish red sandy clay loam or clay loam subsoils. In some areas these soils are underlain by a sandy substratum at approximately 50 inches.

The Bayboro series make up approximately 15 percent of the association. They are also very poorly drained soils with black loam surface layers and deep, very firm, mottled dark gray, yellow and red, sticky and plastic, clay subsoils.

The remaining 10 percent of the association is made up of small areas of other soils.

Approximately 40 percent of the association is in cultivation. The remainder is in woodland. There are however, many acres which are currently being cut over and renovated for cropland. The soils of this association will, with proper management and treatment, produce good to excellent yields of corn, soybeans and small grain. They also produce excellent stands of quality softwood (Loblolly).

The entire association is Class III land.

The soils of this association have severe limitations for all non-farm use because of high water tables, flooding and slow permeability.

7. MAXTON-KALMIA-BARCLAY ASSOCIATION

Well drained to somewhat poorly drained soils with thin solums having gray, sandy loam or very fine sandy loam surfaces and thin friable, red, yellow, mottled yellow and gray, sandy clay loam or silt loam subsoils.

This association comprises approximately 1 percent of the County's total acreage and is recognized as a separate group because of certain distinctive characteristics not evidenced in most other soils in the County. Two-thirds of the Town of Edenton is supported by members of this association as well as some adjacent farm lands. Other very small areas occur in the extreme southeastern tip and along the north bank of Dillard Creek to the north.

The Maxton series make up approximately 40 percent of the association. They are well drained soils with gray or brownish gray sandy loam surface layers over reddish brown to brown, friable to firm sandy clay laom subsoils underlain by a sandy substrata at approximately 40 inches.

The Kalmia series make up approximately 25 percent of the association. They, too, are well drained soils with gray sandy loam surface layers over friable yellow or yellowish brown sandy loam to sandy clay loam subsoils underlain by a sandy substrata at approximately 40 inches.

The Barclay series make up approximately 15 percent of the association. They are somewhat poorly drained soils with gray very fine sandy loam or sandy loam surface layers over friable, mottled yellowish brown and gray, very fine sandy loam or silt loam subsoils with a sandy substratum occurring at approximately 55 inches.

The remaining 20 percent of the association is made up of small areas of other soils.

Practically 98 percent of the association is cleared land. Approximately 60 percent is in cultivation and 38 percent is devoted to urban and residential sites. The remaining 2 percent is in woodland. Approximately 60 percent of the association is Class I land and the remainder is Class II with a few small scattered acres of Class III land.

The primary members of this association have slight to moderate limitations for non-farm use.

8. SWAMP-ALLUVIAL LANDS (WET) ASSOCIATION

Poorly to very poorly drained soils having black surface textures ranging from loamy sands to loam. Textures of the subsurface layers range from loamy sands to clay.

This association comprises approximately 3 percent of the County's total acreage. It occurs in or as fringe areas along the many drainage systems of the County as well as bog areas on the western boundary along the Chowan River.

Swamp makes up approximately 55 percent of the association. It consists of very poorly drained soils developed in mixed alluvial deposits which are primarily loamy sand but range to clay loam. They are inundated the year round.

Alluvial lands (wet) are composed primarily of the Bibb and Johnston series. Together they make up approximately 35 percent of the association.

The Bobb soils make up approximately 30 percent of the Alluvial lands. They are poorly drained soils with black loamy fine sand or sandy loam surface layers and very dark gray stratified subsurface layers of fine sandy loam, loam and sand. These soils have water tables at or near the surface the year round. They are frequently flooded.

The Johnston soils make up approximately 65 percent of the Alluvial lands. They are very poorly drained black soils with high organic or muck surface

layers, 20 to 40 inches thick over fine sandy loam sub-surface layers. They are inundated throughout most of the year.

The remaining 10 percent of the association is made up primarily of muck.

Practically all of the association is in woodland with a few scattered acres being renovated for pasture. Approximately 60 percent of the association is Class VII and the remainder is Class IV or V land.

These soils are best suited for woodland and wildlife refuges. They are not suited for most other uses.

9. MUCK (HISTOSOLS) ASSOCIATION

Very poorly drained soils with a shallow organic surface layer. Texture of the mineral layer below is primarily sand but may be loamy sand or sandy loam in places.

This association comprises approximately 1 percent of the County's total acreage. It occurs as a singular body in the southern part of the County along the Chowan River.

Muck makes up approximately 85 percent of the association. The remainder of the association is made up of "ridges" and "fingers" of sandy soils which project into the area north of U.S. #17. The area south of U.S. #17 is all muck. Approximately 85 percent of the association is Class V land and the remainder is IV land.

This association is best suited for native hardwoods and wildlife. They are not suited for most non-farm uses.

It can be seen from the previous descriptions, soil map, and interpretation chart that the different soils impose different capabilities and limitations on the future development of the County. The chart below summarizes the descriptions of the soil associations.

It presents the percentage of land class for each of the nine soil associations:

Soil Association	Class I	Class II	Class III	Class IV	Class V	Class VI	Class VII
			Percentage				
1 Wagram...	1	50	30	20			
2 Bertie...		60	35	5			
3 Coxville...		20	70	15	15		
4 Bladen...		1	97	2			
5 Myatt...			99+	1			
6 Bladen...			100				
7 Maxton...	60	29+	1				
8 Swamp...				20	20		60
9 Muck				15	85		

Thus, the major portion of land in Chowan County is of Class II, III, & IV land. The outstanding problem with these classes of land is surface drainage and high water table.

Furthermore, information from the Soil Interpretation Chart reveals that 81% of Chowan County land falls in the first four associations. Wagram-Ocilla-Lakeland; Bertie-Johns; Coxville-Dunbar-Craven; & Bladen-Coxville-Lenoir. Generally the soil associations are listed in order, with the association with the least limitation for a particular activity first.

Under the "Development Potential" section of this report the soils best suited for a particular activity will be discussed.

Mineral Resources

With the exception of sand pits used by the N. C. State Highway Commission in road building, mineral resources in Chowan County are at present non-existent.

A recent inquiry to the Division of Mineral Resources resulted with the following reply: "We find nothing significant in our records to report...Since no formal investigation has ever been carried out in that area this merely indicates a lack of data not necessarily lack of minerals."[7]

Surface Water

An investigation and inventory of water resources may be grouped into two large categories--ground water and surface water. The former has previously been examined under the section entitled "Geology and Ground Water". It is the purpose of this section to examine the potential with regard to all sources and supplies of surface water.

Rivers and Streams are classified by the N. C. Department of Natural and Economic Resources, Office of Water and Air Resources and are illustrated on Map VI. The classifications are based upon existing or contemplated best usage of the various waters and segments of the waters in the basin as determined through studies made and public hearings held within the area.

It is also appropriate to note that the Advisory Board to the Office of Water and Air Resources is presently conducting public hearings and gathering information to update the classification of rivers and streams across the State. It is anticipated that the Chowan River classification will be upgraded from a Class C to a Class B. The proposed reclassifications are shown in brackets ( ).

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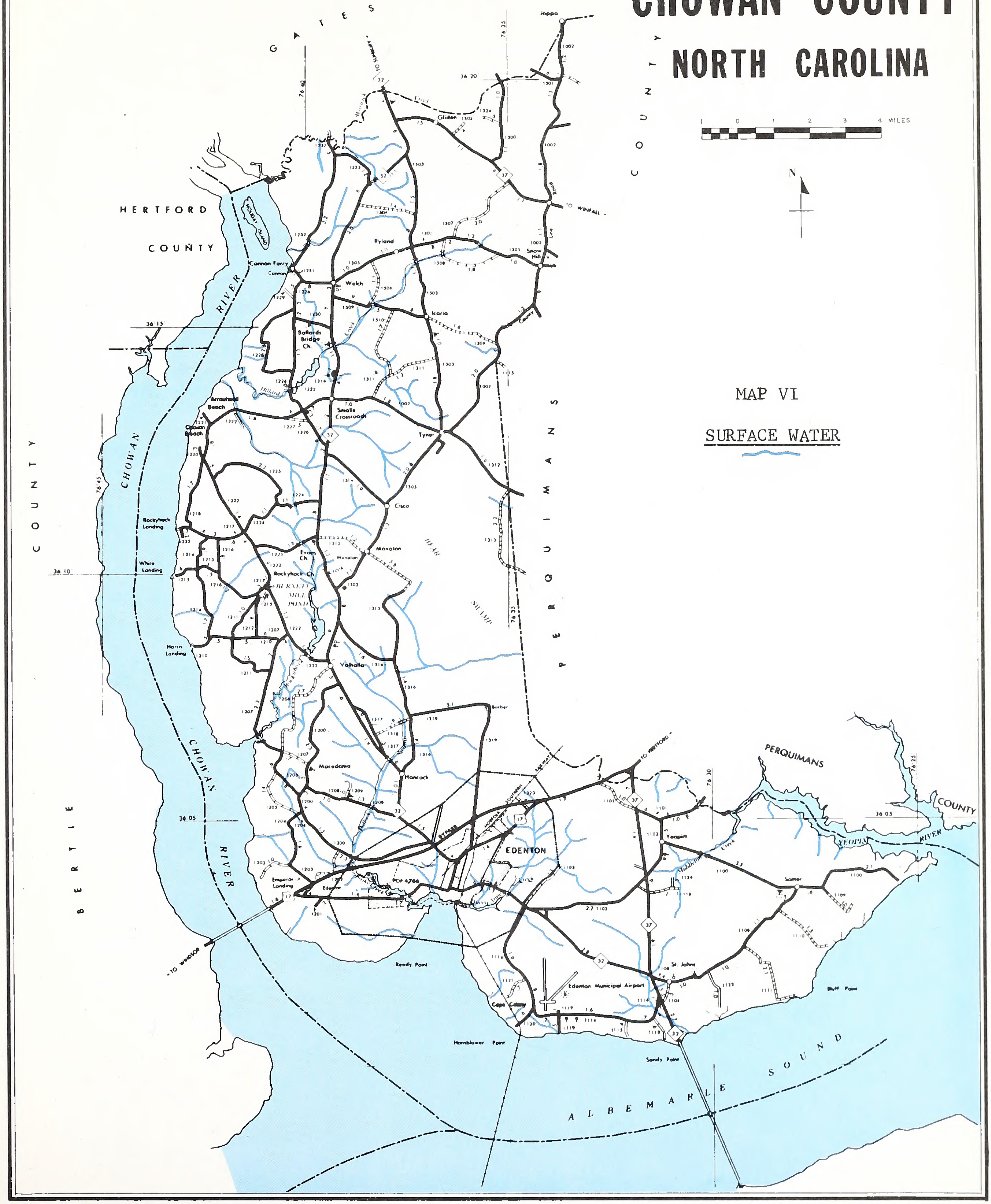
[7] Letter dated June 23, 1972, from James T. Sampair, N.C. Department of Natural and Economic Resources, Division of Mineral Resources, Raleigh, N. C.

CHOWAN COUNTY
NORTH CAROLINA



MAP VI

SURFACE WATER

The following is a brief explanation of the classifications given to salt and fresh waters of the Chowan and Pasquotank River Basins by the Office of Water and Air Resources.[8]

Fresh Water

Class A-I - Best usage of waters: source of water supply for drinking, culinary or food-processing purposes provided waters have watersheds which are uninhabited and otherwise protected; plus any other usage requiring water of lower quality.

Class A-II - Best usage of waters: source of water supply for drinking, culinary, or food-processing purposes after approved treatment equal to coagulation, sedimentation, filtration, and disinfection, etc. and other usage requiring waters of lower quality.

Class B - Best usage of waters: Fishing, boating, wading and any other uses requiring waters of lower quality.

Class D - Best usage of waters: Agriculture, fish survival, navigation, and industrial cooling and process water supply after treatment by the user as may be required under each particular circumstance.

Tidal Salt Waters

Class SA - Best usage of waters: Shellfishing for market purposes and any other usage requiring waters of lower quality.

Class SB - Best usage of waters: Bathing and any other usage except shellfishing for market purposes.

Class SC - Best usage of waters: Fishing and any other usage except bathing or shellfishing for market purposes.

Classifications of the streams and rivers in the Chowan River Basin are as follows:

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[8] Adopted by the State Stream Sanitation Commission, March 7, 1956.

River	Classification	Depth
Chowan River	C, from SCL railroad bridge at Tunis to mouth, exclusive of Colerain, Mount Gould, and Edenhouse Branch	15' - 24'
Troutman Creek	C, from source to Chowan River	
Warwick Creek	C, from source to Chowan River	4' - 12'
Dillard Creek	B, from source to Chowan River	4' - 10'
Rockyhock Creek	B, from source to Chowan River	6' - 10'
Albemarle Sound	C, (B) from mouth of Chowan River to a line extending from mouth of Black Walnut Swamp to north end of Norfolk-Southern Railroad Bridge across Albemarle Sound	20'
Edenton Bay	C, entire bay	20'
Pembroke Creek	C, (B) from source to Edenton Bay	3' - 10'
Pollock Swamp	D, (C) from source to Pembroke Creek	2' - 6'
Queen Ann Creek	C, from source to Edenton Bay	3' - 8'
Edenhouse Beach	B, area within a line beginning at the west end of U. S. Hwy. 17, Chowan River Bridge, running in an easterly direction along U. S. Hwy. 17 Bridge to a point on the Bertie-Chowan County line located in the middle of Chowan River; thence in a southernly direction along the Bertie-Chowan County line to a point located 2000 feet downstream; thence in a straight line west to a point located on the west bank of Chowan River; thence in a northernly direction along shoreline to the point of beginning.	

Classifications of the streams and rivers in the Pasquotank River Basin are as follows:

River	Classification	Depth
Yeopim River	SC, from source to Albemarle Sound	8'
Burnt Mill Creek	C, from source to Yeopim River	3' - 8'
Middleton Creek	C, from source to Yeopim River	3- - 8'

Ponds	Classification	Depth
Dillards Mill	B, 75 acres	4 - 6'
Bennett Mill	B, 200 acres	4 - 6'
Crisanti	Not classified, 25 acres	6 - 7'
Cape Colony	Not classified, 6 acres	4 - 6'
Van Matre	Not classified, 7 acres	4 - 6'

The Soil Conservation Service has completed two small watershed projects in Chowan County and has several proposed projects. The two completed projects are the Burnt Mill and Pollock Swamp, completed in 1961 and 1964, respectively. One proposed project is Bear Swamp which would encompass 20,000 acres.

The purpose of these projects is to remove flood waters and to lower the water table in order to improve the land for various purposes. However, most of these areas are centers of recharge to the principal Aquifer systems as discussed earlier. The swamps and wetlands where the water table is near the surface contain vast quantities of water that, in the past, have exceeded the recharge requirements of the Aquifer systems. However, with the extensive and continuing decline in water levels over much of the area, the situation has changed considerably during recent years. Significant effects of drainage on recharge may have already occurred, but the magnitude of the effects may not be known for many years. Thus, improved water management must be implemented in the Albemarle Area. Future drainage systems must be designed with structures to hold the water table at the highest level possible except when the removal of flood waters is necessary.

In addition, the Soil Conservation Service in a recent publication entitled, The Potential for Outdoor Recreation in Chowan County, N. C., listed

three potential impoundment sites for recreation. The three sites are:[9]

	Site	Size	Flow
1.	Warwick or Catherine Creek (NC-MA Chowan 11-19)	300 acres, drainage area - 10,000 acres	continuous run off, springs and streams
2.	Dillard Creek (NC-MA Chowan 11-20)	200 acres, drainage area - 10,000 acres	moderate run off, springs and streams
3.	Tributary of Dillard Creek (NC-MA Chowan 11-20)	400 acres, drainage area - 2,000 acres	springs and streams

Another important fact regarding surface water is the condition of the Chowan River. A recent algae bloom of the Chowan River prompted a great deal of concern for its condition. The following is taken from the Interim Report of Chowan River Water Quality Study. The report was prepared by the Office of Water and Air Resources, N. C. Department of Natural and Economic Resources in September, 1972. Herein are the conclusions and recommendations of that report.

"The lower Chowan River has experienced an algae bloom of nuisance proportions during the summer of 1972. While some important characteristics of the river have changed recently, and these changes could have triggered the bloom, available evidence indicates that the major influence was the level of nutrients, particularly nitrogen.

Nitrogen levels have, for years, been near or slightly above the levels normally deemed necessary for nuisance algae blooms. The existence of minor blooms each year would have tended to assimilate and store nutrients within the system. It is theorized that this accumulation of nutrients, together with the increasing nutrient input brought about by increasing population and

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[9] The Potential for Outdoor Recreation Chowan County, N. C., Soil and Water Conservation Committee, Edenton, N. C., Appendix J.

industrialization and changing agricultural practices, would have resulted in the beginning of eutrophication of the river at some time in the future. However, it appears obvious that the discharge of nitrogen from the Farmers Chemical Association, Inc., plant at Tunis provided the impetus needed to create the bloom experienced this year.

Nitrogen is contributed from many sources, including municipal and industrial discharges, and agricultural and swamp drainage. The lower Chowan River is in the beginning stages of eutrophication, and even though the Farmers Chemical plant discharge undoubtedly hastened the process, all nutrient contributors must share proportionately in the blame for this condition and must accept their responsibility for taking remedial action.

Acceleration of the eutrophication process must be eliminated or minimized whether the source be agricultural, industrial or municipal. It should be kept in mind, however, that some increase in nutrient levels in lakes and rivers, such as the Chowan, is a natural process and will not be reversed easily or quickly.

While one of the major nutrient sources has been eliminated, it cannot be assumed that the problem of eutrophication of the river has been solved. Evaluation of the data and the literature indicates that the lower Chowan may continue to experience massive and, perhaps, nuisance algal blooms for some years to come.

In that connection, while the Chowan River is the first in North Carolina to show the beginning of a state of eutrophication, it probably will not be the last. All the coastal sounds, and the lower portions of all the major rivers lying north and east of the Cape Fear, are subject to the same factors affecting the Chowan. Of particular concern, the lower Pamlico and Neuse Rivers are already showing evidence of over fertilization, and deterioration to a eutrophic condition appears imminent.

Development and rigid enforcement of a comprehensive water management plan, based on extensive and continuing studies, is vitally needed if the coastal waters of North Carolina are to remain an asset rather than become a liability to the people of the State."

RECOMMENDATIONS

"It is recommended that the discharge of large amounts of nutrients from the Farmers Chemical Association, Inc., plant not be allowed to recur.

It is recommended that the studies be initiated in two areas of concern:

1. An extensive and detailed study should be established of conditions affecting the Chowan River, with the ultimate goal of developing a water management plan designed to apply to all the State's coastal waters. This study should determine the effect, if any, of changed chemical quality of water, and should investigate and evaluate all nutrient inputs to the system, including the re-cycle of nutrients from the bottom sediment. The Union Camp discharge, because of its seasonal nature, should receive special consideration to determine its net effect.

2. An expansion of our normal stream monitoring program should be initiated to allow collection of samples for nutrient analysis at every location presently sampled, plus establishment of selected additional sampling locations in the estuarine areas.

It is further recommended that appropriate effluent standards for nutrient constituents, specifically nitgogen and phosphorus, be adopted as early as is feasible."

U. S. Army Corps of Engineers (Wilmington District)[10]

The U. S. Army Corps of Engineers listed two authorized projects within Chowan County. The first project is an active authorized project not started on the Chowan River. It provides for a channel 12 feet deep and 80 feet wide from the mouth to the confluence of the Noltoway and Blackwater Rivers, including a cutoff of like dimensions near Riddicksville, about one mile below the confluence. Only the Riddicksville portion of the project is in an active status.

The second project is on Pembroke Creek and is inactive. This project, authorized in 1945, provides for a channel 12 feet deep, 80 feet wide from the improved channel in Edenton Bay upstream 500 feet; thence 8 feet deep and 50 feet wide to the wharf of the U. S. Fish Hatchery. The project was authorized subject to the conditions that local interest furnish, free of cost to the United States, suitable spoil-disposal area for initial work and for subsequent maintenance as required. Improvement of Pembroke Creek was recommended on the basis of its benefit to an existing Federal establishment (U. S. Fish Hatchery) and to the benefits that would result from locating the channel so as to permit economics in barge shipment of lumber. Statistical records of the Corps of Engineers office indicate no commerce has been transported via Pembroke Creek since it was authorized in 1945.

Transportation

Three primary highways (U.S. 17, N.C. 32, and N.C. 37) and numerous secondary roads transverse Chowan County. U. S. Highway 17 serves as a major axis of travel across the county and connecting Edenton with Elizabeth City

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[10] Water Resources Development in North Carolina, U.S. Army Corps of Engineers, Wilmington, N. C., 1971, p. 43 and 53.

and Norfolk to the north and Williamston and Washington to the south. N. C. Highway 32 is a major axis running north-south from the Albemarle Sound to Sunbury in Gates County. N. C. Highway 37 enters from Perquimans County at two points, one connecting with N. C. 32 in the south at St. Johns and again connecting with N. C. 32 in the north near Gliden. Transportation systems along with traffic counts are shown on Map VII.

While Chowan County has fairly good access to all points within the county, the transportation system is limited to the west and south. Large wide bodies of water, notably the Chowan River and the Albemarle Sound are barriers to accessibility in these directions. This problem is not confined to Chowan and neighboring counties, but to the whole Albemarle region with its numerous bodies of water.

Another obstacle to highway travel is on U. S. Highway 17 in Edenton. Fortunately, the proposed bypass around Edenton will eliminate this problem in the future. Furthermore, a proposed coastal corridor from Norfolk to Wilmington to replace U. S. Highway 17 would parallel N. C. 32 and cross the Albemarle Sound.

Secondary roads in Chowan County are fair, though many are narrow. The N. C. State Highway Commission is in the process of improving these roads by straightening alignments and widening rights-of-way particularly N. C. 37, SR 1111, and SR 1311.

Edenton is a point for stops for major bus transportation, primarily Carolina Trailways and Seashore Transportation System. There is also truck service provided by several carriers, such as Thurston, Estes, Helms, Pilot, Overnight, and many other motor carriers. Rail transportation is available at Edenton by the Norfolk and Southern Railroad with connections at Norfolk and Washington, N. C. Good industrial sites are located along the railroad and Norfolk to the north and Williamston and Washington to the south. N. C. Highway 32 is a major route running north south from the Albemarle Sound to Sunbury in Gates County. N. C. Highway 37 enters from Perquimans County at two points, one connecting with N. C. 32 to the south at St. Johns and again connecting with N. C. 32 in the north near Gliden. Transportation systems along with traffic counts are shown on Map (1).

While Chowan County has fairly good access to all points within the county, the transportation system is limited to the east and south. Large wide bodies of water, namely the Chowan River and the Albemarle Sound, are barriers to accessibility in those directions. This problem is not confined to Chowan and neighboring counties, but to the whole Albemarle region with its numerous bodies of water.

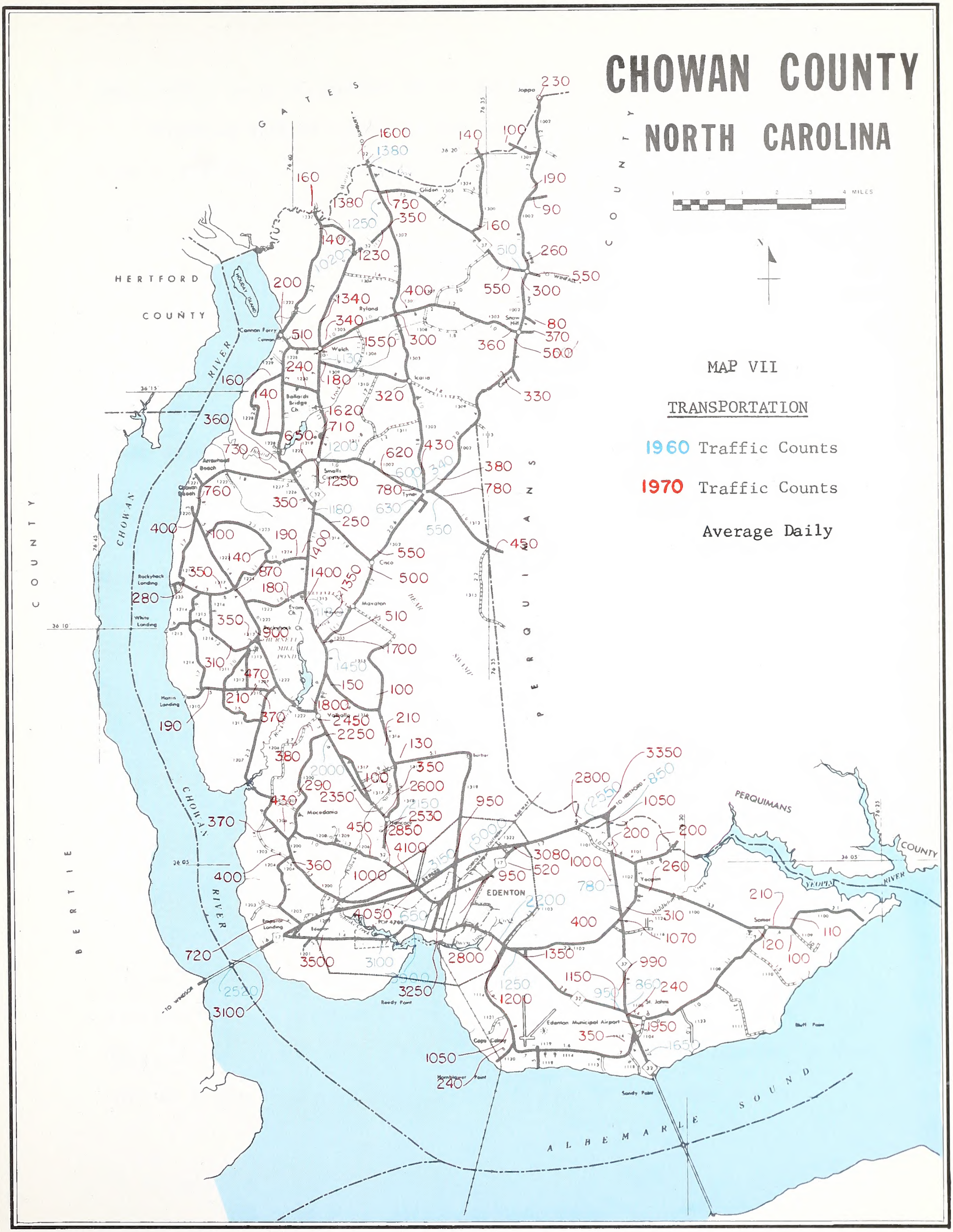
Another drawback to highway travel is the U. S. Highway 17 in Edenton. Eventually, the proposed bypass around Edenton will eliminate this problem in the future. Furthermore, a proposed coastal corridor from Norfolk to Wilmington to replace U. S. Highway 17 would parallel N. C. 32 and cross the Albemarle Sound.

Secondary roads in Chowan County are fair, though many are narrow. The N. C. State Highway Commission is in the process of improving those roads by straightening alignments and widening right-of-way particularly N. C. 37, and SR 1221.

Edenton is a major bus stop for major road transportation, primarily Carolina Trailways and Seashore Transportation Company. There is also truck service provided by several carriers, such as Thurston, Estes, Helms, Tilley, Overnight, and some other motor carriers. Rail transportation is available at Edenton by the Norfolk and Southern Railroad with connections at Norfolk and Washington, N. C. Most industrial sites are located along the railroad

CHOWAN COUNTY

NORTH CAROLINA



MAP VII

TRANSPORTATION

1960 Traffic Counts

1970 Traffic Counts

Average Daily

particularly north of Edenton and at the Edenton Municipal Airport.

Scheduled airline service is not available to Elizabeth City. However, Edenton Municipal Airport located just southeast of Edenton is an excellent general aviation facility. Occupying a former Marine Corps Air Station, this facility is a 6,000 foot, paved, lighted runway. Maintenance and charter flights are available from a private aviation service. This facility has been and will continue to be an important locating facility for industrial prospects. Several industrial firms such as Grampian Marine, Ltd., Tee-Lok Corp., Fiberform, and others are located on the former air base property. There is also a private landing field located adjacent to SR 1222 near Arrowhead Beach which is used by a crop spraying firm. Efforts to maintain the Edenton Municipal Airport should be encouraged for this facility has a great deal of potential for industry and as a community service facility.

Public Utilities

Electricity

In today's modern era, it is fairly uncommon to find inhabited areas that are not served by electricity. In Chowan County the entire County is served by electricity. Virginia Electric and Power Company serves approximately 80 percent of Chowan County. The remainder is served by Chowan REA in the northern part of the County. Furthermore, Edenton owns and maintains its own distribution system, purchasing power wholesale from VEPCO.

VEPCO has a major transmission power line roughly paralleling the Norfolk and Southern Railroad tracks which crosses the County at Edenton. This line carries 115,000 volts and connects to a sub-station in Edenton. A spur line of 34,000 volts runs north of Edenton also to Perquimans County.

Natural Gas

There are no natural gas transmission or distribution facilities in the County at present. The North Carolina Natural Gas Corporation has been authorized to serve Chowan County and has projected a transmission pipeline across the County to Serve Edenton. Construction of this pipeline was originally scheduled for 1973, but in recent years gas demand has increased many fold, while supply has dwindled across the nation. Consequently, a gas pipeline to serve Chowan County is forthcoming; however, it is doubtful whether earlier predictions for construction completion in 1973 can be met.

Telephone

Telephone service is provided to the entire County by the Norfolk and Carolina Telephone and Telegraph Company.

Water and Sewer

As previously stated, public water supplies are available in Edenton and at the Edenton Municipal Airport area. The Town of Edenton owns and operates the water system within its corporate limits. While the airport supply is owned by the Aqua Water Company, Wilmington, N. C., this company supplies the airport area and Cape Colony, a residential subdivision nearby.

Outside of these two service areas, water is obtained from shallow wells on an individual basis.

The Town of Edenton has a municipal type sewage collection system and treatment plant. This plant has a design capacity of one million gallons per day. The plant is already at maximum capacity and plans are underway to increase this capacity for the Town. "There is also a sewer system in the building area of the former Marine Air Station but it has been abandoned for a number of years. It would probably be useless to try to rehabilitate it."[11] Rural residents must depend upon individual sewer disposal systems, namely septic tanks.

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[11] Comprehensive Area-Wide Water & Sewer Planning Report, p. 92.

III GENERAL LAND USE

In order that development potentials of the County can be accurately analyzed, the present use of the land must be known. The entire county will be analyzed as one unit. The analysis will cover residential, agricultural, commercial, cultural, recreational, and industrial land use. Map VIII indicates the general land use in Chowan County.

Residential Land Use

While residential land use is located throughout the County, there are areas of concentration which constitute a residential pattern in Chowan County. The three major areas of residential land use are as follows:

1) Edenton and its periphery - of 10,764 persons in Chowan County according to the 1970 census, approximately 46 percent resided in Edenton alone;

2) The resort and second home subdivisions of Cape Colony with approximately 1166 lots; Arrowhead Beach with approximately 2148 lots; and Chowan Beach undetermined number of lots; (all lots are not yet occupied)

3) And scattered strip residential development along paved primary and secondary roads, particularly U.S. 17 south, N.C. 32 North, N.C. 37, SR 1200, SR 1222, and SR 1303.

There are three major problems associated with residential land use in Chowan County. These problems need to be checked. If they are not at least discouraged, residential development in many areas of the County will become undesirable in the future. The first problem regarding residential land use is the previously mentioned strip development occurring along the roads. This threatens to "land lock" quantities of desirable land located back from the roads, and increases the possibility of future blight of houses presently being built along these roads. Another consequence of strip development is the inevitable connecting driveways. Numerous individual driveways greatly decrease the utility of the road and increase the danger to residents and highway user.

III. GENERAL LAND USE

In order that development potentials of the County can be accurately assessed, the present use of the land must be known. The entire county will be analyzed as one unit. The analysis will cover residential, agricultural, commercial, cultural, recreational, and industrial land use. Map VIII indicates the general land use in Chowan County.

Residential Land Use

While residential land use is located throughout the County, there are areas of concentration which comprise a residential pattern in Chowan County. The three major areas of residential land use are as follows:

(1) Edenton and its environs - of 10,764 persons in Chowan County according to the 1970 census, approximately 60 percent resided in Edenton alone.

(2) The eastern end of the county, taking in areas of Cape Colony, with approximately 1,000 lots, Arrowhead Beach with approximately 2148 lots, and Chowan Beach (undetermined number of lots); (all lots are not yet occupied)

(3) The ribbon strip residential development along paved primary and secondary roads, particularly U.S. 17 south, N.C. 32 north, N.C. 37, SR 1001, SR 1222, and SR 1114.

There are three major problems associated with residential land use in Chowan County. These problems need to be checked; if they are not at least discouraged, residential development in some areas of the County will become unmanageable in the future. The first problem concerning residential land use is the continually scattered ribbon development occurring along the roads. This continues to leave large "back" acreages of agricultural land located back from the roads, thus increasing the possibilities of future blight of houses presently being built along these roads. Another consequence of strip development is the increased, numerous driveways. However, this will increase greatly between the vehicles of the road and increase the danger to residents and highway users.

Moreover, driveways should connect to collector streets which in turn would connect to major thoroughfares thereby eliminating unnecessary curb cuts on major thoroughfares. This is evident along U.S. 17 and N.C. 32. The future may well see these homes' desirability and therefore their value decrease because of their proximity to heavy traffic and because of their location so near the front lot line when road widening occurs.

The second problem is undersized lots; particularly the large subdivisions of Arrowhead Beach, Chowan Beach, and Cape Colony. While all lots are not undersized, the majority are too small to support either individual water supply systems (wells) or individual sewage disposal systems (septic tanks) much less both on the same lot. Fortunately, however, Chowan County adopted Subdivision Regulations in April, 1971 to insure: better design of subdivision, adequate lot size, and that facilities for health, safety, and welfare are provided. The adoption of these regulations will help prevent further occurrence of this problem in the future.

The third problem relative to residential land use is the condition of homes as witnessed during the land use survey conducted by the Division of Community Services personnel in July, 1972. The Bureau of Census in 1970 reported that 1037 units or 28.7 percent of all housing units (3614) lacked some or all plumbing facilities. However, this represents a reduction in substandard homes since 1960 when 37% of occupied houses lacked some or all plumbing facilities. The County compares less favorable with the state as a whole. In North Carolina 14.3 percent of all housing units lacked some or all plumbing facilities. Substandard housing compounded with a low vacancy rate of approximately 3 percent indicates good standard housing in Chowan County is in short supply.[12]

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[12] U.S. Bureau of Census, Census of Housing: 1960 and 1970 General Housing Characteristics HC (1) A 35 North Carolina, p. 5 and 75.

Commenting further on residential land use in Chowan County, one finds, as is the case throughout North Carolina, a growing number of mobile homes. In Chowan County they are more noticeable in the large subdivisions used primarily for second and vacation homes. The mobile home now and in the future will house families for permanent and vacation housing, therefore, the same consideration should be given the mobile home as is given to the conventional residential dwelling.

Agricultural Land Use

Agriculture, including forest is the largest user of land in the county with approximately 106,000 acres. Approximately 32,240 acres of this are harvested for crops; 6,000 acres are devoted to pasture and idle cropland; 67,000 acres are of forest and the remaining constitute miscellaneous uses. The latest agriculture statistics provided by the Chowan County Agriculture Extension Service gives the following breakdown of the major crops and the number of acres harvested.

HARVESTED CROPS

1970

Crop	Acres
Corn for grain	10,300
Cotton	1,080
Hay	1,700
Oats	160
Peanuts	6,250
Soybeans for beans	11,500
Tobacco	380 (782,800 lbs.)
Sweet Potatoes	200
Wheat	670
	32,240

The 1969 Census of Agriculture has reported the total number of farms at 430 and the average size of farms at 137.4 acres. The same source recorded that the number of farms in 1959 totaled 465 representing a 7.5 percent fewer farms in 1969 as in 1959. In 1959 the average size farm was 105.5 acres while in 1969 the average size had increased to 137.4 acres representing a 30 percent increase in ten years. It can be assumed from these figures that the small and less prosperous farmer is moving or seeking alternative employment and the more prosperous farmer is acquiring more farmland as is the case nationally.

Another aspect of Chowan County's agriculture is the growing importance of truck crops such as vegetables, sweet corn, melons and others. In 1970 the total acres harvested for truck crops amounted to 5156 acres while in 1976 it is forecasted that this will increase to 7095 acres.[13] This is due in part to the ever expanding Norfolk metropolitan market area.

In summary, agriculture land use is the principal land use in Chowan County. This characteristic is expected to continue in the future for Chowan County has the necessary ingredients of rich soils, favorable climate and an agriculture base to produce a variety of agriculture products. In fact, the County may not lead the State in the production of any particular crop due to its compact size, however, it is a state leader in the variety of crops grown.

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[13] Chowan County Agriculture Extension Service, *Impact '76, Chowan County*, Edenton, N. C. 1972, p. 58-59.

Cultural and Recreational Land Use

Cultural land use includes schools, community centers, fire and rescue facilities, churches, health facilities, and historic buildings and sites. These cultural facilities are as follows:

Schools

Schools in Chowan County are under the direction of a single administrative unit, the Edenton-Chowan Board of Education with offices located in Edenton. Facilities include:

John A. Holmes High School - Edenton
D. F. Walker Elementary and Junior High School - Edenton
E. S. Swain Elementary School - Edenton
Chowan High School - Smalls Crossroads
White Oak Consolidated School

The College of the Albemarle has an extension unit located in Edenton.

Community Centers

Community centers, fire departments, rescue squads serve a social function as well as their public and recreational use. Community centers are located in the following areas:

Edenton
Rocky Hock
Smalls Crossroads
Macedonia
Oak Grove
Ryland

Churches

There are approximately 15 churches located throughout the County representing various denominations. They are also the dominant factors socially in the communities.

Health Facilities

Chowan County is fortunate to have a modern hospital completed in 1971 which is operated by Chowan Hospital, Inc. a private, nonprofit organization located on N.C. 32, north in Edenton.

This facility has at present four intensive care beds and 57 general care beds, with the capability of being expanded to serve 100 beds. The previous general hospital adjoining the new one is a 44 bed extended care unit. There is also a nursing home having a capacity to serve 15 patients. The Chowan Hospital serves not only Chowan County but, neighboring counties as well.

Edenton and Chowan County are rich in historic events as mentioned earlier in this report. A complete list of historic sites appears in Appendix A.

Other cultural land use consists of the various community service facilities provided by the communities, the County, the State and the U.S. Government. Among these uses are:

Fire and Rescue

Fire and rescue departments include the Edenton Municipal Fire Department, Smalls Crossroads Rural Fire Department, and Edenton-Chowan Rescue Squad in Edenton, Smalls Crossroads, Rocky Hock, and Glidden.

County Offices

The County Office Building, formerly the Joseph Hewes Hotel, is adjacent to the Chowan County Courthouse in Edenton which quarters many of the County's agencies and offices such as Sheriff's, Tax, and Health Departments, Agriculture Extension Service, and others. Also, the Economic Improvement Council office is located at the Edenton Municipal Airport.

State Agencies

The North Carolina Department of Agriculture has a Veterinary Diagnostic Laboratory located on SR 1319 and weight scales at Hancock. Other State facilities include State Highway Commission field garages on SR 1208 and SR 1303. The Wildlife Resources Commission has a boat launch along the Chowan River at U. S. 17.

Recreation

Recreational land use constitutes both public and private facilities. Among the private recreational facilities are the Chowan Golf and Country Club with about 60 acres; it has a nine-hole golf course and swimming pool near the Edenton Municipal Airport. Arrowhead Beach Subdivision has a 20 acre park with a beach on the Chowan River, picnic grounds, and assembly hall. Cape Colony Subdivision has a park and picnic area of 20 acres with swimming on Albemarle Sound and playground areas. Also, fishing and waterfowl activities exist on Crisanti Pond in Cape Colony and Van Matre on the Yeopim River.

Public recreational facilities include the Wildlife Resources Commission boat launch on U.S. 17 south; Dillards Pond on Dillard Creek; Bennett Mill Pond on Rocky Hock Creek; and those facilities provided for residents of the Town of Edenton.[14]

The Town of Edenton has six tennis courts, a scout cabin and playgrounds adjacent to John A. Holmes High School and Morgan Park. There is a ballfield on the Edenton Cotton Mills Property.[15]

Furthermore, there are several passive recreation facilities in Edenton such as the visitor's center, museum, and numerous historic sites. Historic sites and buildings are a mucleus for potential recreation development. This subject is discussed further under the chapter, "Development Potential" of this report.

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[14] The Potential for Outdoor Recreation, Chowan County, N.C., Chowan County Soil and Water Conservation Committee, Edenton, N. C., 1972.

[15] Community Facilities Plan and Public Improvements Program, Division of Community Planning, N. C. Department of Local Affairs, Raleigh, 1970, p. 48.

Commercial Land Use

The major concentration of commercial land use activity is, of course, Edenton. In addition, there are commercial uses located throughout the County particularly at rural crossroads such as Tyner, Valhalla, Welch, Yeopim, and Smalls Crossroads. It is evident that rural commercial uses resulted from earlier population concentrations and traffic circulation. To determine if commercial uses adequately serve the retail needs of a particular community is difficult. However, based on observations of Edenton's Central Business District (South Broad St.) and a proposed shopping center on U.S. 17 North, it is doubtful that commercial uses throughout the County serve their community adequately. Therefore, Edenton is most likely to remain the center for retail shopping activity for Chowan County. Also, the location and distribution of many rural commercial uses has created problems which might not have occurred had they located elsewhere. For instance, the traffic congestion and hazard associated with single rural commercial uses and to a degree, a lacking protection of property are often the result. With insufficient off-street parking, cars are often parked on or close to secondary roads reducing the field of vision.

Since the rural commercial uses serve a very definite purpose in the community, it is not beneficial to the rural residents to discourage their use. However, as seen from the comments above, it is imperative that a great deal more consideration be given to their location. Specifically, the rural commercial uses should be located so as not to impair necessary sight distance and they should provide adequate off-street parking areas.

In regards to distribution of commercial uses, the northern half of the County is at a disadvantage in terms of convenience, since the major shopping facilities are located in Edenton, in the extreme southern tip of the County. These problems in future development could be reduced to a minimum with the adoption and enforcement of a zoning ordinance.

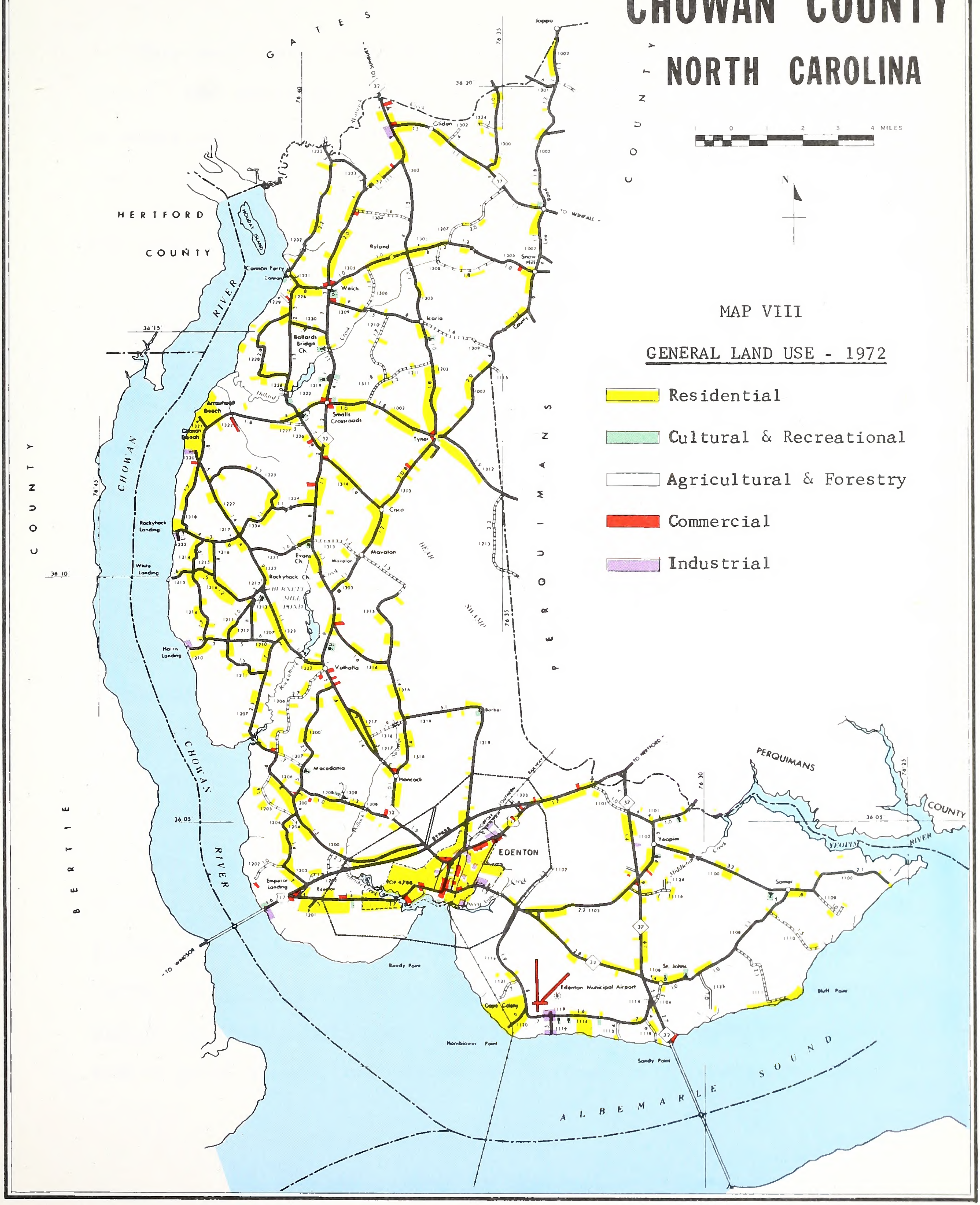
Industrial Land Use

Industrial land use activities in Chowan County are concentrated primarily in Edenton and at the Edenton Municipal Airport. The Edenton Development Corporation has greatly enhanced the opportunity for economic growth with the purchase and development of 56 acres of land for an Industrial Park on U.S. 17 North. Several industries have located in the park since its inception in 1954. Some of the industries are: Seabrook Blanching Corporation - a peanut processor; Towson Lumber Company - a pallet and crate manufacturer; and George C. Moore Co. - manufacturer of elastic webbing products. Approximately 40 acres remain undeveloped in the park and 120 acres are available adjacent to it. The park is served by the Norfolk and Southern Railroad Company. Other corporate citizens located in Edenton are: Edenton Cotton Mills; Carter's Ink Company; Chowan Veneer Company; Jimbo's Jumbos, Inc.; and Darf Corporation.

The Edenton Municipal Airport property is also a rapidly developing industrial area. The airport has and will continue to be an attractive asset for industrial location in Chowan County. Recently Fiberform, a division of U.S. Industries, announced plans to purchase the old Chris Craft boat plant to manufacture fiberglass boats. Also, within the past year, Grampian Marine, Ltd., a Canadian sailboat manufacturer located on the airport property. These two recent additions will contribute significantly to an existing industrial community of Tee-Lok Company, Union Camp's Barge Site and Burris Chemical Company.

Industrial development outside of Edenton and the Edenton Municipal Airport has been rather isolated and by nature less dependent upon the services available from Edenton and the airport. Specifically, United Piece and Dye Works, Inc., located along the Chowan River on SR 1220, is the only major industrial operation outside of the two previously mentioned areas. Seasonal industrial operations occur at Valahalla, Produce Company; Rocky Hock Landing; a fish processor; and an agricultural processor near Glidden.

CHOWAN COUNTY
NORTH CAROLINA



MAP VIII

GENERAL LAND USE - 1972

🟨 Residential

🟩 Cultural & Recreational

⬜ Agricultural & Forestry

🟥 Commercial

🟪 Industrial

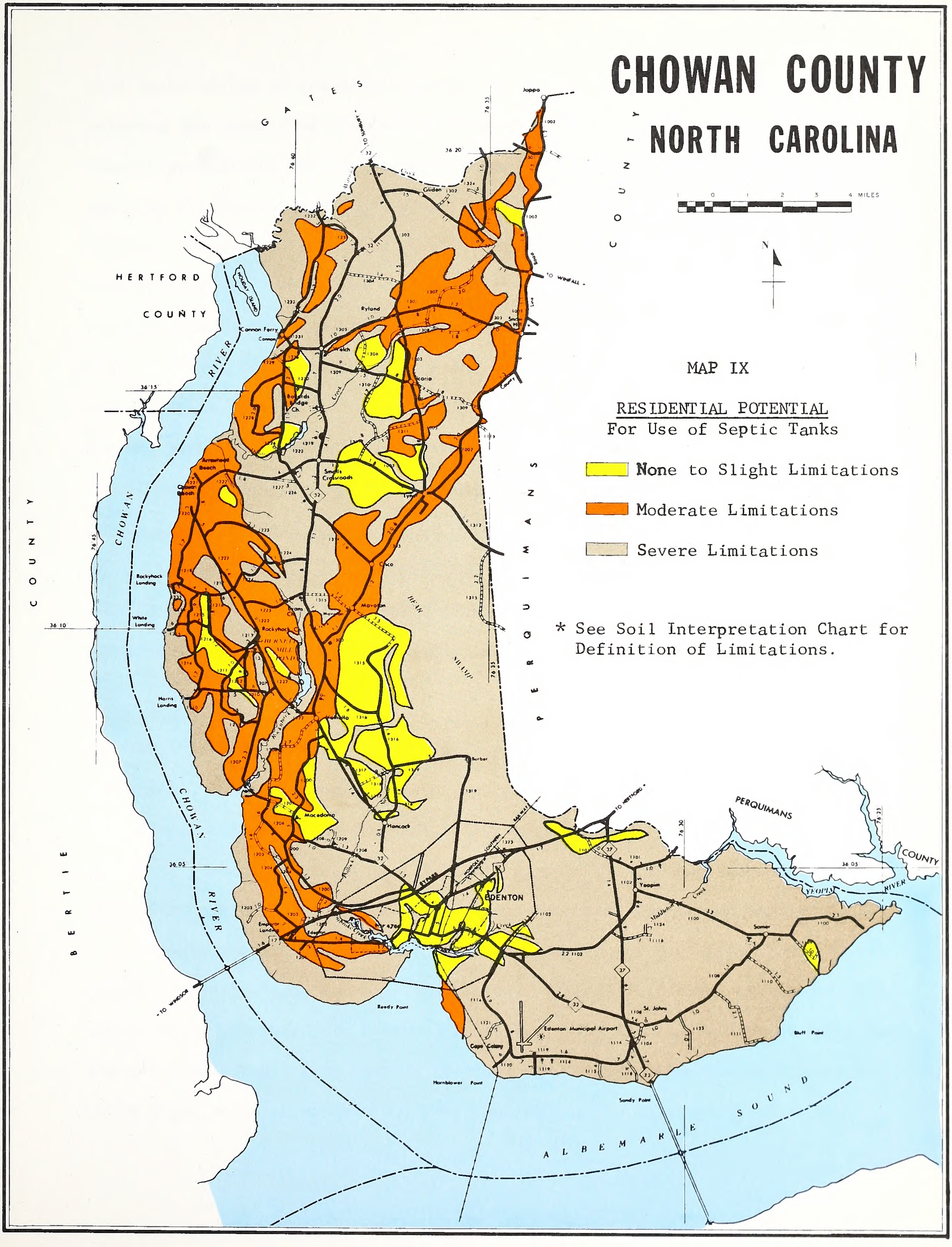
IV DEVELOPMENT POTENTIAL

This chapter will summarize factors influencing development in Chowan County. The limitations placed on potential development by these factors will be emphasized. Areas in the County that offer the greatest development potential are pointed out.

Residential

It is anticipated that residential construction will prosper in the following areas: Edenton and periphery, rural crossroads, and along the Chowan River and Albemarle Sound. Additional residential development can be expected in the vicinity of the Chowan Golf and Country Club and where large industrial plants locate. With residential and other types of development comes the need for water and sewer services. Problems associated with water and sewer are minimized to a degree in Edenton and other communities which have these community facilities. However, with scattered, single residential development which will no doubt occur in the County, water and sewer facilities become critical. The analysis of soils and ground water are of utmost importance in this respect. Fortunately, the majority of soils in the County are adequate for septic tank filter fields. (Map IX indicates residential potential for septic tank use.) As for ground water, it may be obtained depending on location within a maximum of approximately 450 feet below surface. It is important to note that with both soils and ground water the quality of each will vary from site to site, thus necessitating a thorough on-site investigation prior to construction. In regard to solving problems of rural water and sewer services, it becomes apparent that Chowan County should adopt as an objective, principles promoting the concentration of residential development. By doing so, the County would achieve "economies of scale" thereby, facilitating the construction of rural and/or county-

CHOWAN COUNTY
NORTH CAROLINA



MAP IX

RESIDENTIAL POTENTIAL
For Use of Septic Tanks

🟨 None to Slight Limitations

🟧 Moderate Limitations

▨ Severe Limitations

* See Soil Interpretation Chart for Definition of Limitations.

wide water system at reasonable costs. As previously mentioned, the County has retained the consulting firm of Rivers and Associates, Greenville, N. C., to conduct preliminary engineering surveys and feasibility studies necessary in applying for Federal and State grant funds. Assuming such a system was installed, it would be a boom to rural development in general for Chowan County (see Appendix B). While the system would improve greatly the availability of a potable water supply, nevertheless, scattered development would result. In addition to inefficient utility service and increased cost, other problems of "land locked" areas, protection of property, and traffic hazards as discussed in Residential Land Use section result when scattered residential development occurs.

Thus, advocating concentrated residential development cannot be stressed enough for it is only the residents of Chowan County who stand to gain in terms of tax dollar return. The implementation of concentrating residential development can be accomplished through strict enforcement of land use control ordinances such as subdivision regulations and zoning.

Agricultural

What is the potential for agriculture in Chowan County? According to soil conditions, climate, growing season, and market area the potential is excellent. Only minor problems exist that are reflected in the soil conditions. The majority of the soils must be fertilized to produce the desired crops and several areas have drainage problems. Agricultural potential appears on Maps X and XI.

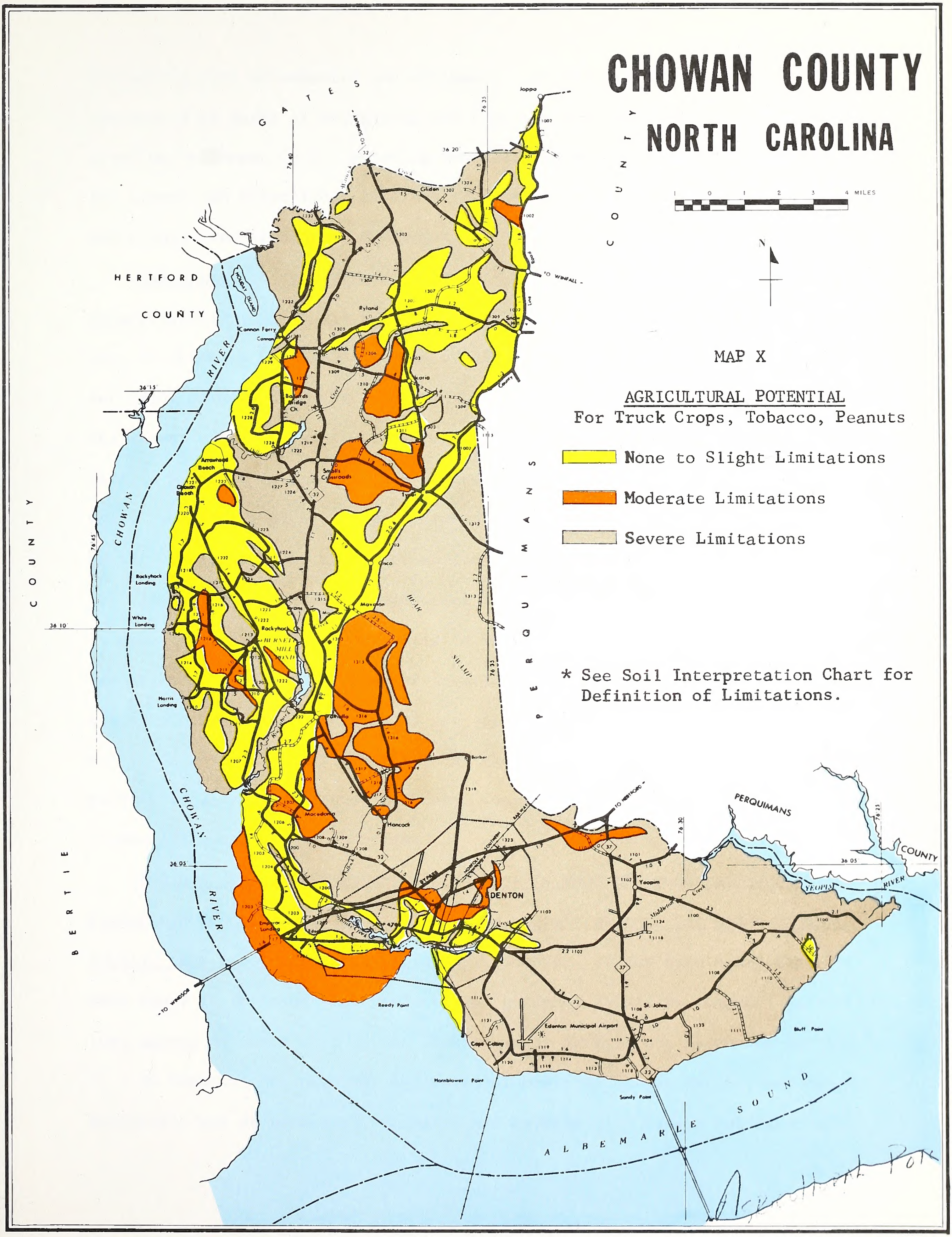
While there are very few natural limitations noted for agricultural development, there are some man-made limitations. These limitations have forced the agricultural industry into a transitional era. The farming enterprise today has changed considerably from that of 20 years ago. This change can be attributed to increased cost of production. Most notably is the shortage of labor and wide water system at reasonable costs. As previously mentioned, the County has retained the consulting firm of Rivers and Associates, Greenville, N. C., to conduct preliminary engineering surveys and feasibility studies necessary in applying for Federal and State grant funds. Assuming such a system was installed, it would be a boon to rural development in general for Chowan County (see Appendix B). Since the system would improve greatly the availability of a potable water supply, unrestricted, scattered development would result. In addition to inefficient utility service and increased cost, other problems of 'land locked' areas, destruction of property, and traffic hazards as discussed in Section VI and the Soils Survey report, when scattered residential development occurs.

Thus, water system extensions and residential development should be directed toward the areas in Chowan County that are rated best in terms of the soils' ability. The implementation of concentrating residential development can be accomplished through strict enforcement of land use controls such as subdivision regulations and zoning.

Agriculture

What is the potential for agriculture in Chowan County? According to soil scientists, growing season, and market data the potential is excellent. This rating applies to most land and is reflected in the soil conditions. The capability of the soils used in agriculture to produce the desired crops and several areas have only minor problems. Agricultural potential appears on Maps 8 and 21.

While there are very few natural limitations noted for agricultural development, there are some man-made limitations. These limitations have forced the agricultural industry into a capital-intensive form. The farming operations today are changed considerably from that of 20 years ago. This change mainly attributed to increased cost of production, best exemplified in the shortage of labor and



CHOWAN COUNTY
NORTH CAROLINA

MAP X

AGRICULTURAL POTENTIAL
For Truck Crops, Tobacco, Peanuts

- 🟨 None to Slight Limitations
- 🟧 Moderate Limitations
- 🟫 Severe Limitations

* See Soil Interpretation Chart for Definition of Limitations.

Agricultural Pot

increasing cost of supplies and equipment. It has already been stated that the number of farms is decreasing and that the average size of farms is increasing in Chowan County pointing towards greater efficiency. In order that the farmer can effectively farm his crops with less laborers, he must seek assistance from mechanical equipment.

One aspect of agriculture in Chowan County which has not been developed extensively is that of truck crops and vegetables. The main obstacle to further development has been the lack of adequate marketing and storage facilities for local farmers. However, even with the lack of facilities, it is anticipated the amount of acres devoted to growing truck crops will continue to rise. With this in mind, it is time to give serious consideration to enhancing its development. Locating a plant to quick-freeze and process fruits and vegetables could be the results of just such a promotion.

In 1957 there were four operating sawmills in Chowan County. Today there is one. This loss is due primarily to increased cost of production and low lumber prices. Couple this with the locating of several large more efficient lumber mills in neighboring counties and one can understand the decline of local sawmills. However, forests remain one of Chowan County's greatest assets. Forest product extraction continues in Chowan County and with well managed timber land, income derived could be increased.

Another agriculture potential business is that of feeder pig production. Feeder pig production would utilize large amounts of corn for grain produced locally thus generating greater income. However, it has been noted that before money is invested that professional guidance should be sought. An excellent agency to start with is the Chowan County Agriculture Extension Service.

In summary, the need for agricultural products always exists, and the potential such as good soil, climate, and markets will remain but labor will increasing cost of supplies and equipment. It has already been stated that the number of farms is decreasing and that the average size of farms is expanding in Chouteau County pointing towards greater efficiency. In order that the farmer can effectively hold his own with cost increases, he must seek assistance from mechanical equipment.

The growth of agriculture in Chouteau County which has not been developed extensively is that of truck crops and vegetables. The main obstacle to further development has been the lack of adequate marketing and storage facilities for these farmers. However, along with the increase in facilities, it is anticipated the amount of acres devoted to growing truck crops will continue to rise. With this in mind, it is time to give serious consideration to enhancing its development. Locating a plant for processing and [illegible] fruits and vegetables could be the impetus to give such a production.

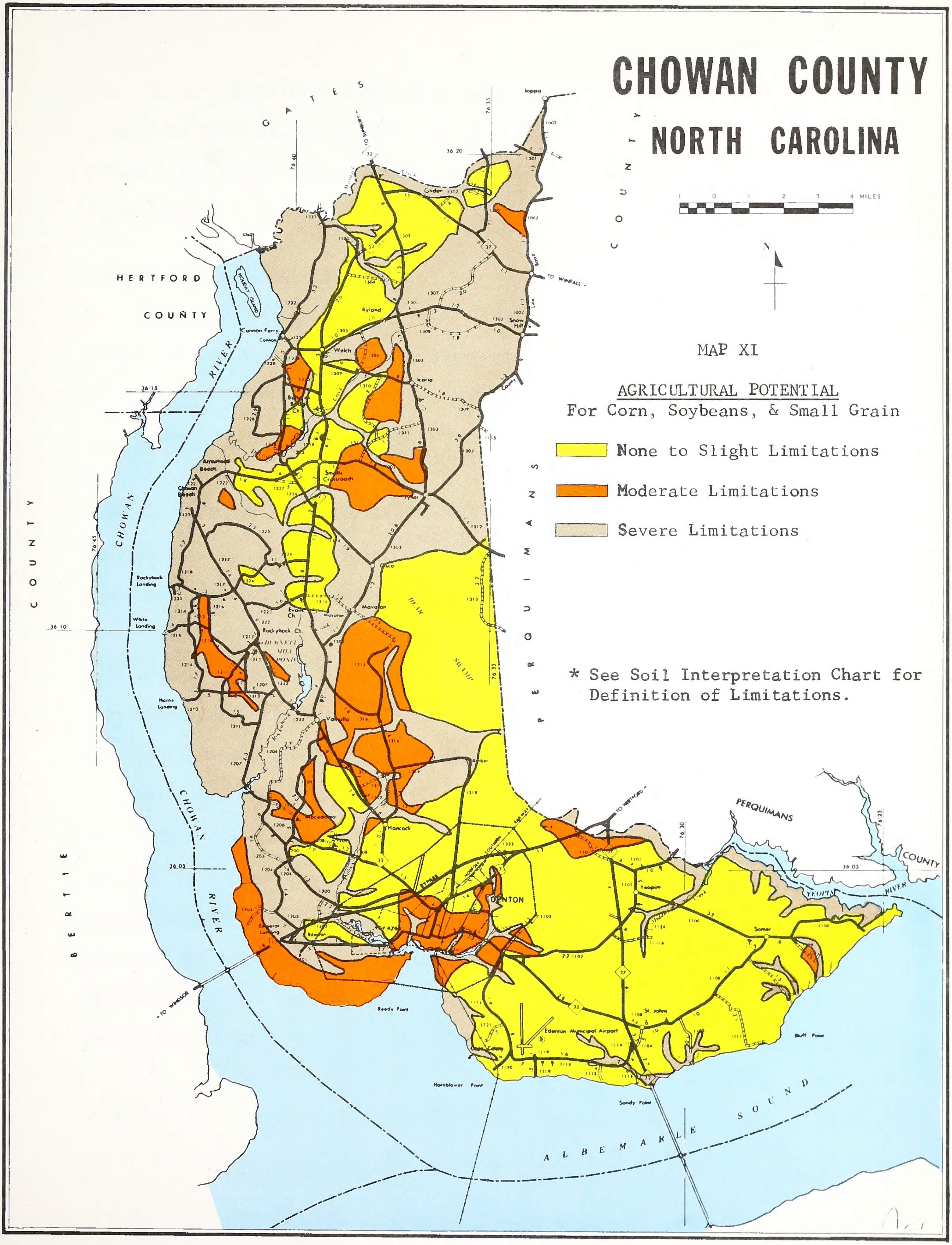
In 1951 there were four operating creameries in Chouteau County. Today, there is none. This loss is due primarily to increased cost of production and lacking new market. Coupled with this with the lessening of several large more efficient dairy operations in neighboring counties and one can understand the decline of small operations. However, a simple comparison of Chouteau County's present assets, future growth through the development of Chouteau County and with well managed dairy farms could [illegible] should be developed.

Another agriculturally related industry in which the county has opportunities is a [illegible] which could utilize large amounts of both the grain produced locally and the livestock industry. However, it has been noted that the [illegible] is presently with substantial [illegible] quality of produce, as would be the Chouteau County agriculture [illegible].

In summary, the need for agricultural products [illegible] and the potential [illegible] will [illegible]

CHOWAN COUNTY

NORTH CAROLINA



MAP XI

AGRICULTURAL POTENTIAL
For Corn, Soybeans, & Small Grain

🟨 None to Slight Limitations

🟧 Moderate Limitations

🟫 Severe Limitations

* See Soil Interpretation Chart for Definition of Limitations.

not. In an effort to overcome these obstacles and further develop other aspects of agriculture, it will require a combined effort by all those involved. The result will depend on the leadership and willingness to take first steps.

Cultural and Recreational

Potential for cultural and recreational development in Chowan County has always been outstanding for three reasons: 1) abundance of natural features, 2) numerous historic sites, and 3) nearness to a large population center.

Homes in Edenton and Chowan County are nationally known for their colonial authenticity and fine state of preservation. While most serve as private dwellings some are open to the public during home tours. Under the auspicies of the Edenton Historic District Commission and Historic Edenton, Inc., the County and Town have realized a tremendous asset in historic and cultural facilities. Moreover, there are several historic sites in the County that should be restored and made a part of the Tour. It is advised that all communities in the County support the endeavors undertaken by the historic societies, for they are attractive calling cards and evidence of exuberate community spirit.

While the County lacks facilities for indoor recreation, the County is fortunate to have completed by the Soil Conservation Service an inventory and prospect of outdoor recreation. This study entitled, The Potential for Outdoor Recreation in Chowan County, North Carolina, uses a group judge procedure to appraise the potential for major types of outdoor recreational development. The following five activities were deemed to have the highest potential for development (highest potential first):

1) small game hunting areas
2) water fowl hunting areas
3) big game hunting areas
4) warm water fishing
5) historic areas

The following seven activities were deemed to have a medium potential for development:

6) vacation cabins, cottages, & homesites
7) vacation farms
8) picnicking areas
9) vacation camping grounds
10) game, play, and target areas
11) bicycling areas
12) water sports areas

The following five activities were deemed to have a low potential for development:

13) transient camping grounds
14) standard and par-3 golf courses
15) shooting preserves
16) riding stables

The evaluation was based on 16 key elements with points allotted to each according to impact. The key elements were as follows: climate, scenery, natural areas, historic areas, soils, habitat, impoundment sites, existing activities, populations, size and distribution, age and occupations, income levels, proximity to different size urban centers, local access, tourist routes, and land ownership and use.

For the most part the evaluation is fairly accurate, however, under the activities of shooting preserves and riding stables consideration of population was limited to the local populace. It is anticipated that the future population of the area and of the Norfolk metropolitan area will have a considerable impact upon these activities. With this in mind perhaps their potential would be improved. Although potentials exist in the County for recreation, the potential cannot develop alone. The people of the County must have the incentive to work for recreation facilities and they must let this fact be known.

On the following pages are charts of the natural and scenic areas and a map locating these as taken from the outdoor recreation report. Conservation of our natural resources is very important today, therefore, these areas that cannot be farmed or developed could be the beginning of natural reserves in Chowan County. These areas would not require detailed development. Development would consist of picnic areas and nature trails. This type facility would contribute a much needed leisure activity.

INVENTORY OF NATURAL & SCENIC AREAS**

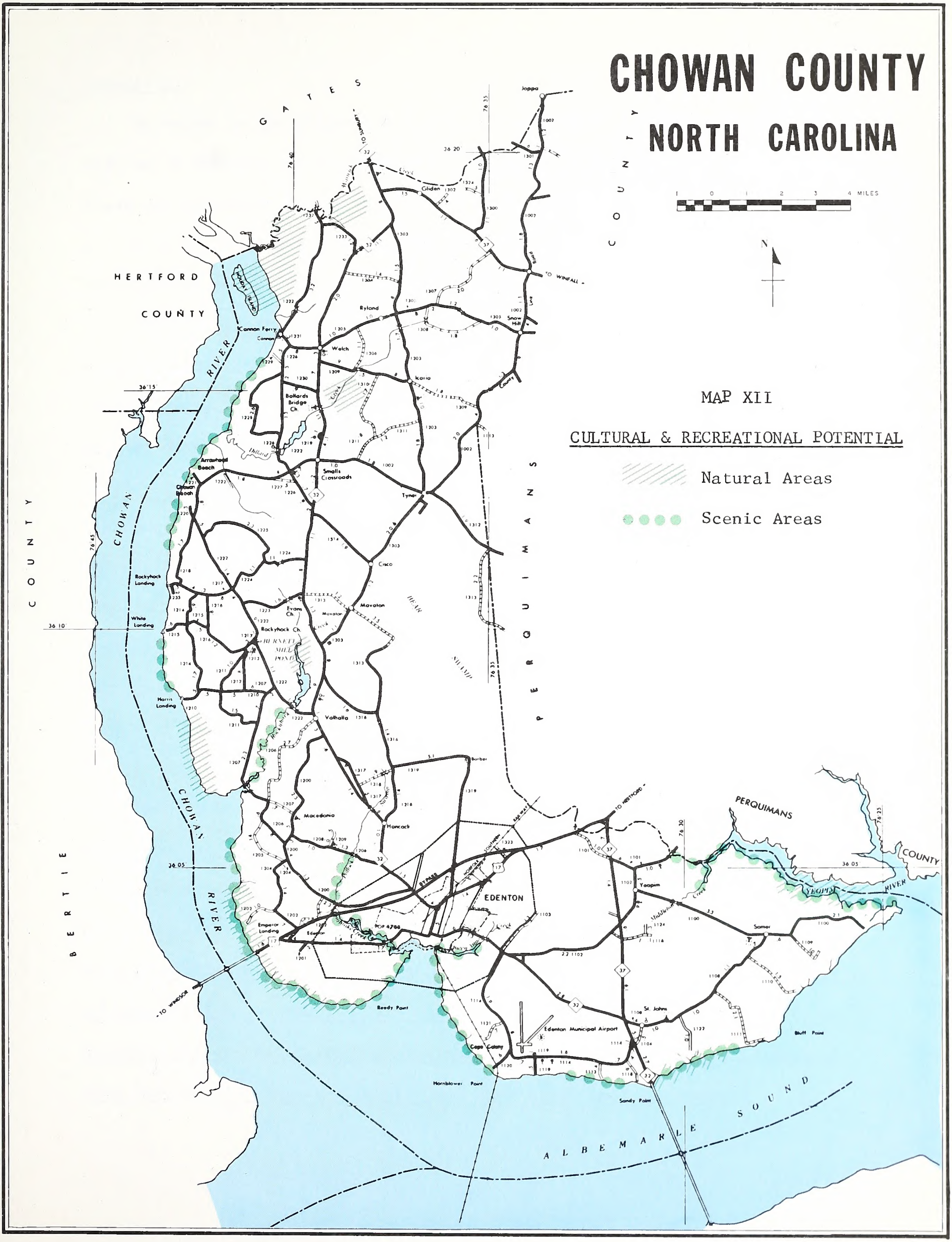
Name or Identity of Area (*Indicates partially developed)	Type of Area	Location		Size of Area	Description of Area	Present Use of Area
		Township (Name)	Highway (no. & miles)			
Chowan River Shore Line*	Natural & Scenic	Western extremity of entire county		20 miles long	Open water and wooded swamps. Good for nature study. Access by numerous state roads and farm roads.	Partially developed for picnicking, camp sites, cottages. Some farmland and commercial fisheries Bathing, skiing
Albemarle Sound Shore*	Natural & Scenic	Southern Boundary of County		20 miles long	Open water and wooded swamps. Good for nature study, access by numerous state roads and farm roads.	Partially developed for picnicking, camp sites, cottages. Some farmland. Bathing, skiing.
Warwick or Catherine Creek Holiday Island	Natural & Scenic	3rd Township	Northeast boundary at Cannons Ferry	2000 to 2500 ac.	Some open water, wooded swamps, shore line, uninhabited Island. Good for nature study, access limited mainly reached by water	Fishing, hunting and trapping. Timber & wildlife
Dillard Creek Mill Pond Area	Natural & Scenic	2nd Township	13 miles north of Edenton west of N.C. # 32	2500 ac.	Some open water, wooded shoreline and swamps. Agricultural land-good for nature study, access from state and farm rds.	Some trailers, cottages, fishing and hunting, farming, Ducks

**Source: The Potential for Outdoor Recreation in Chowan County, N. C., Chowan County Soil and Water Conservation Committee, Edenton, N. C.

INVENTORY OF NATURAL & SCENIC AREAS (Continued)

Name or Identity of Area (*Indicates partially developed)	Type of Area	Location		Size of Area	Description of Area	Present Use of Area
		Township (name)	Highway (no. & miles)			
Rocky Hock Creek, Bennetts (Burnetts) Mill Pond	Natural & Scenic	2nd Township	8 miles north of Edenton west of N.C. #32	1500 to 2000 ac.	Wooded swamps, agricultural land. Pond area good for nature study and botany	Fishing, hunting, timber, wildlife, farming
Johns Island	Natural	Edenton	1½ miles west of Edenton ½ mile south U.S.#17	1500 ac.	Low wooded wetland	Timberland and wildlife
Pembroke Creek*	Scenic	Edenton	West side of Edenton on Hwy. #17	3½ miles in length	Slow moving fresh water creek, partially developed. Wooded shore line, swamp. Some agricultural land. Easily accessible	Boating, fishing, skiing, hunting. Private homes, farms
Queen Anne	Natural & Scenic	Edenton	Southwest edge of Edenton	1 3/4 mi. in length	Slow moving fresh water creek. Wooded shore line. Swamp and agricultural	Fishing and hunting
Yeopim River, Middleton Creek & Burnt Mill Creek	Natural & Scenic	Yeopim	2 miles south east of Hwy. #17 and 5 mi. east of Edenton	7½ miles in length	Slow moving fresh water creek. Wooded shore line, swamp	Fishing, hunting, boating, picnicking, bathing, skiing

CHOWAN COUNTY
NORTH CAROLINA



MAP XII

CULTURAL & RECREATIONAL POTENTIAL

▨ Natural Areas

● ● ● ● Scenic Areas

Commercial

As noted in the chapter on Land Use, commercial development with the exception of Edenton, is found most frequently at secondary road intersections. These are generally one or two service stations and/or grocery stores which are often in substandard condition. Many of these rural stores are gradually being phased out owning to our increased mobility.

The potential that must exist for commercial development is the concentration of population. Presently, the population in the rural areas is scattered rather evenly throughout the County. Factors conducive to the location of commercial developments are as follows: 1) intersection of major transportation routes, 2) concentration of population, 3) presence of other commercial establishments. Thus, major shopping centers must locate near large concentrations of population. In Chowan County this would limit this type development to the Edenton area. A stimulus to this will be provided once the U.S. 17 Bypass is constructed around Edenton. This is true because new highways are apt to encourage highway oriented commercial development. Fortunately, strip development will be discouraged since the highway is to be limited access. (See Map XIII.)

Potential commercial development in rural areas would be realized when major tourist or recreational facilities are constructed. Also, upon the locating of a large industrial plant or a residential subdivision one could expect commercial development. However, as with residential development, it is more favorable to the environment of the County to encourage the concentration of commercial development. This phenomenon would allow greater property protection, lessen the traffic hazard, generate more consumers, and in general have less adverse impact upon the land than mixed land use would.

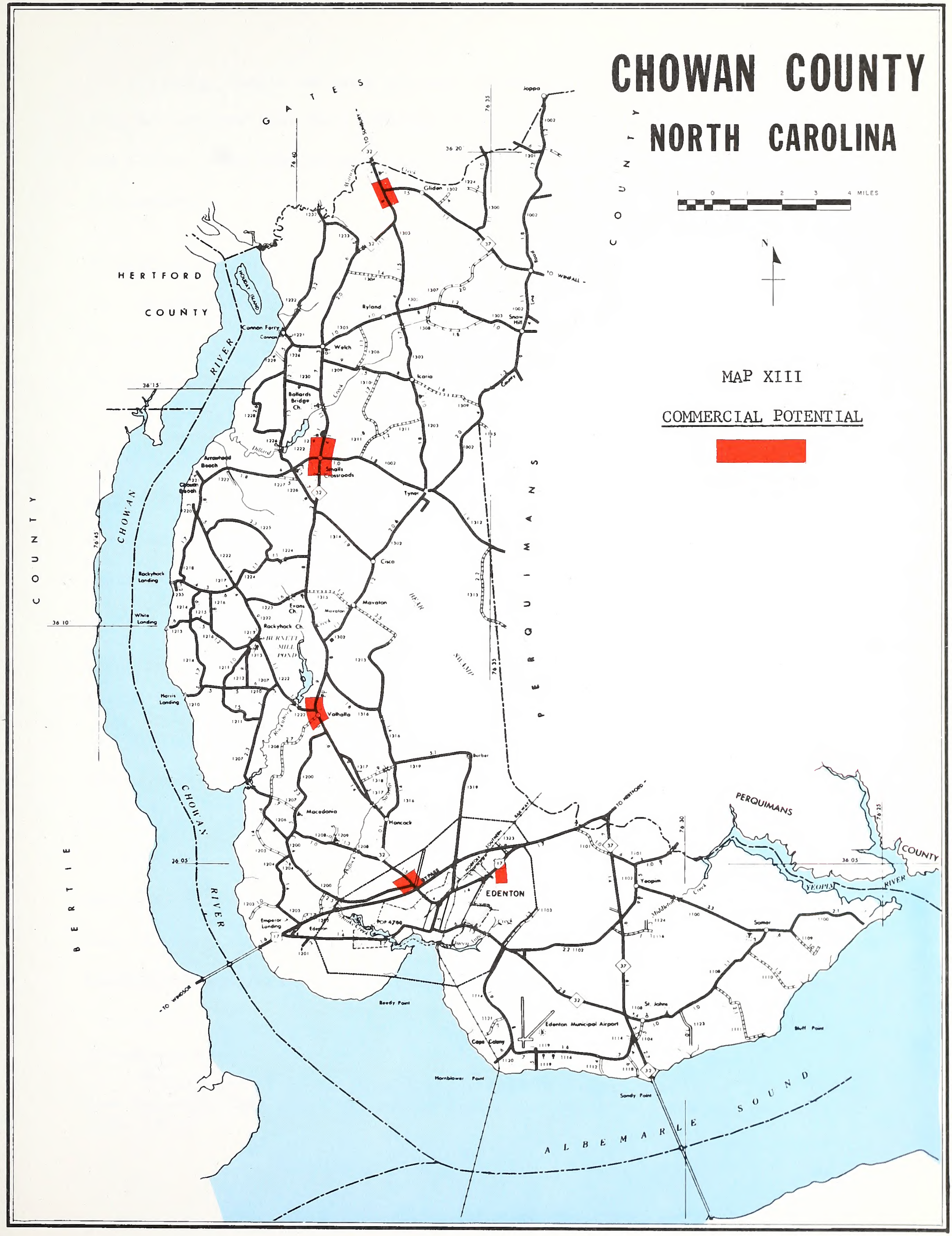
CHOWAN COUNTY

NORTH CAROLINA

MAP XIII

COMMERCIAL POTENTIAL

🟥



Finally, family operated general stores will continue to serve the rural area populations that will continue to reside in the very small communities of the County. The Edenton area will experience the majority of the commercial development.

Industrial

In general, the soils, climate, and topography in Chowan County are conducive to industrial development. Although these factors are very important to the location of industry, many other factors determine location.

First, there should be an adequate labor force. The Edenton labor recruiting area for industrial expansion covers a radius of 25 road miles and approximately 30-40 minutes driving time. The area includes the whole of Chowan and Perquimans Counties; and a portion of Bertie, Gates, Hertford, Martin, Pasquotank, Tyrrell, and Washington Counties. According to the 1970 census, 59,340 persons reside within 25 miles of Edenton. From this area it is estimated that there are 3,250 persons who possess manufacturing job experience or who are deemed to be trainable for jobs in manufacturing.[16]

Distance from major transportation routes is an important factor. As mentioned earlier, the major transportation routes are: U.S. Highway 17 - a north south artery; Norfolk-Southern railroad; and the Edenton Municipal Airport, all of which are in or around Edenton. This fact confines industrial expansion primarily to Edenton. A significant industrial impact upon the County could result from the construction of a limited access highway connecting the County with the Norfolk Metropolitan area as a proposed by the Coastal Plains Regional Commission.

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[16] "Estimate of Recruitable Workers for Industrial Expansion", N.C. Employment Security Commission, Bureau of Employment Security Research, Raleigh, N.C., June, 1972.

Economics of adequate water and sewer facilities is more important to in-dustry. This factor will eliminate, generally, the rural areas of the County as prospects. However, upon the completion of a county wide water system, the potential for industrial and other types of development would be made more attractive.

Electric power is readily available by Virginia Electric Power Company. A major transmission line (115,000 volts) paralells the Seaboard and the Atlantic Railroad company tracks as it passes through Waverly and the southern part of Sussex County.

The 650 available industrial acres and present available industrial sites[1] in Sussex County. Potential industrial areas are based upon the following factors: good bearing soil, level topography, location to major transportation facilities (road, and/or rail), and major utilities. Also, it is assumed that all industries will not need a large quantity of water. Therefore, some industries will function very well.

It is conclusion of this plan the areas which are highly attractive for industrial development and can be developed into workable industrial parks. These areas are: Area one north of Waverly and northeast of Waverly near the Atlantic Development Corporation, Stony Creek, Jarratt and the Waverly Municipal Airport. Both areas already have water and sewer or major capabilities.

Finally, it should be with certainty stressed the importance of industrial citizens it is well important that natural resource be set aside and not forced to large dollars industrial development should be encouraged and not by the expense of the municipalities planning programs of Sussex County. These general locations of such potential industry is in order, for though County may first require be be selected.

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[1] Kimley-Horn and Associates, Inc., Area Development Sites, Virginia Electric Power Company, Richmond, 1973.

CHOWAN COUNTY

NORTH CAROLINA

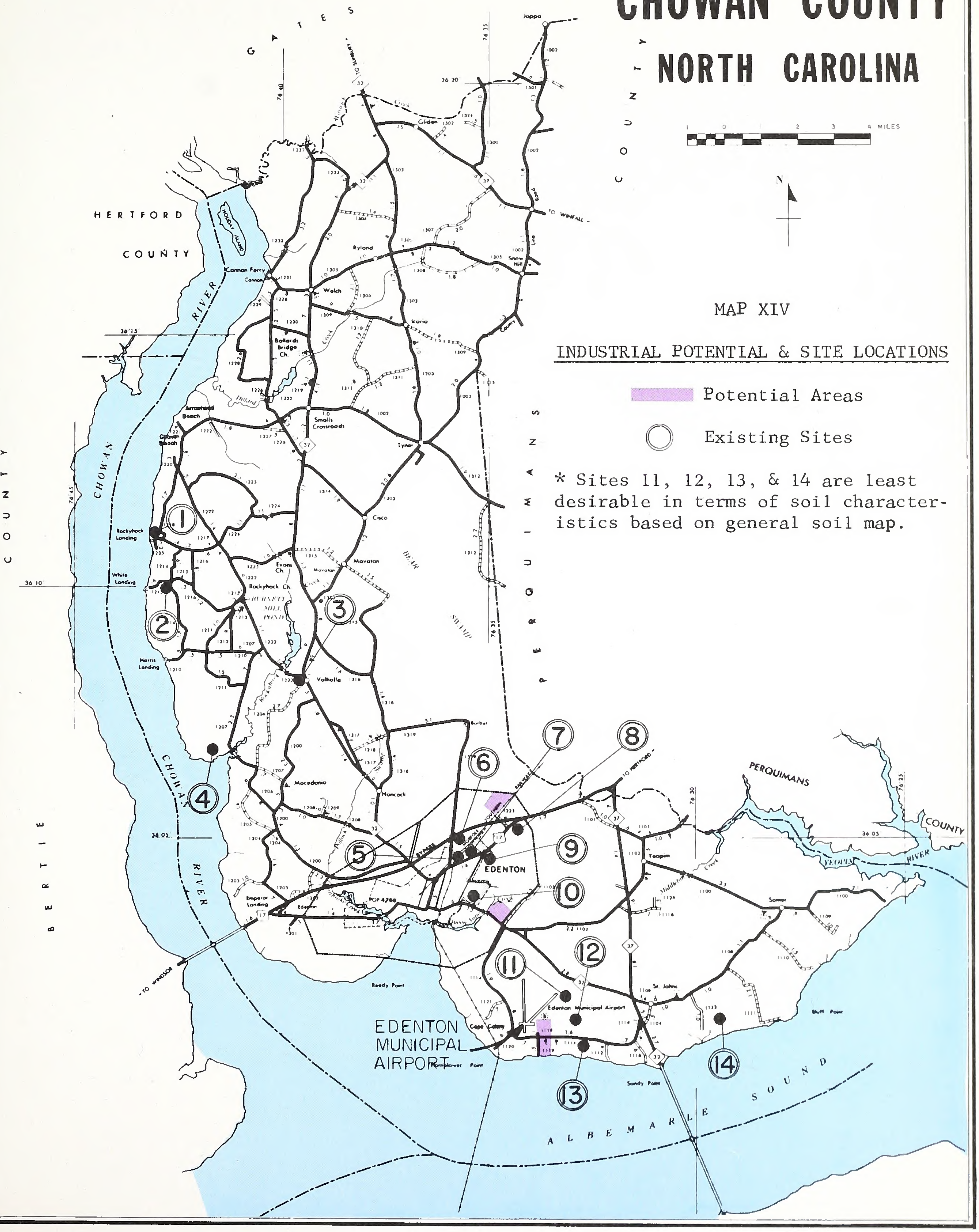
MAP XIV

INDUSTRIAL POTENTIAL & SITE LOCATIONS

🟪 Potential Areas

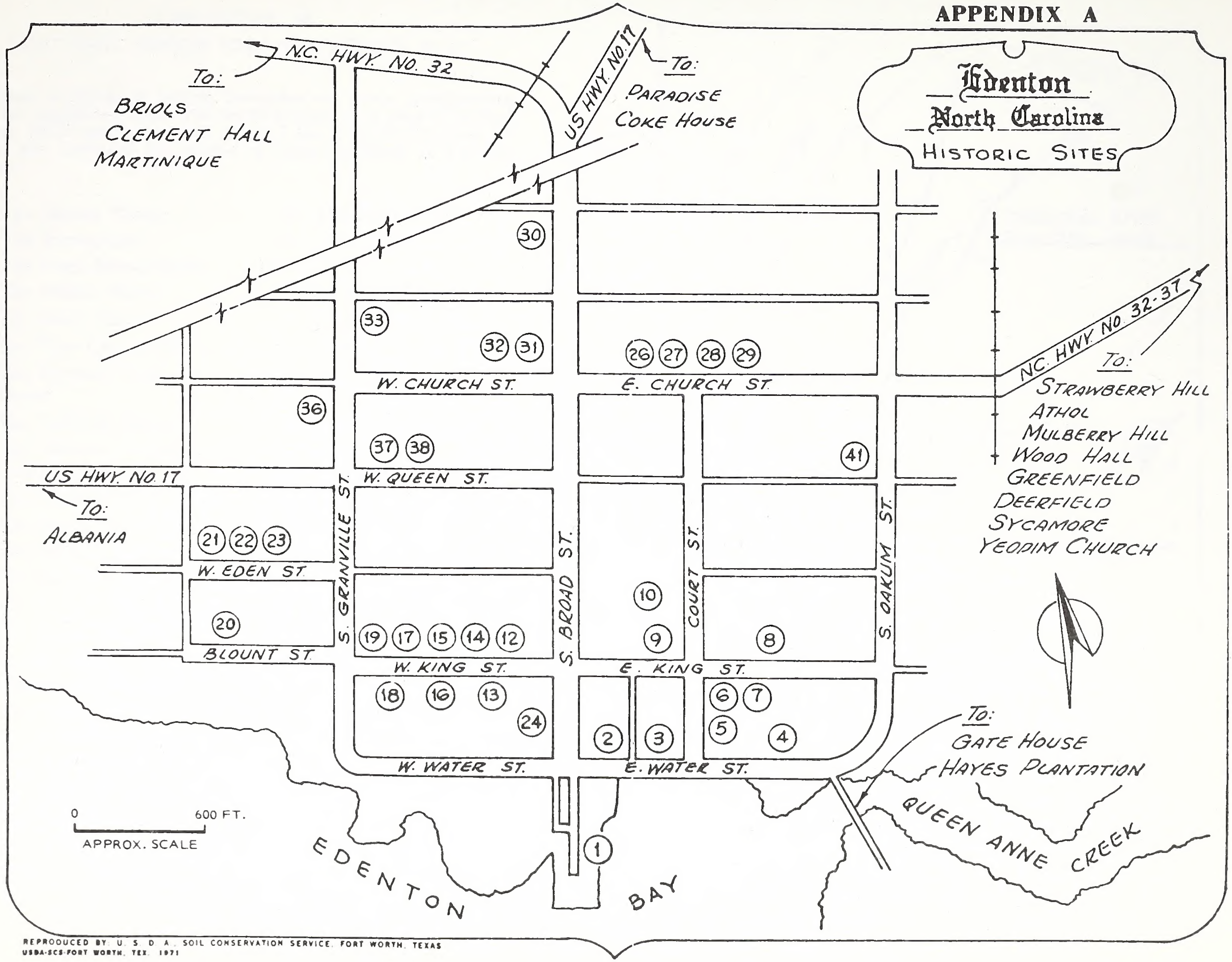
○ Existing Sites

* Sites 11, 12, 13, & 14 are least desirable in terms of soil characteristics based on general soil map.



APPENDICES

APPENDIX A



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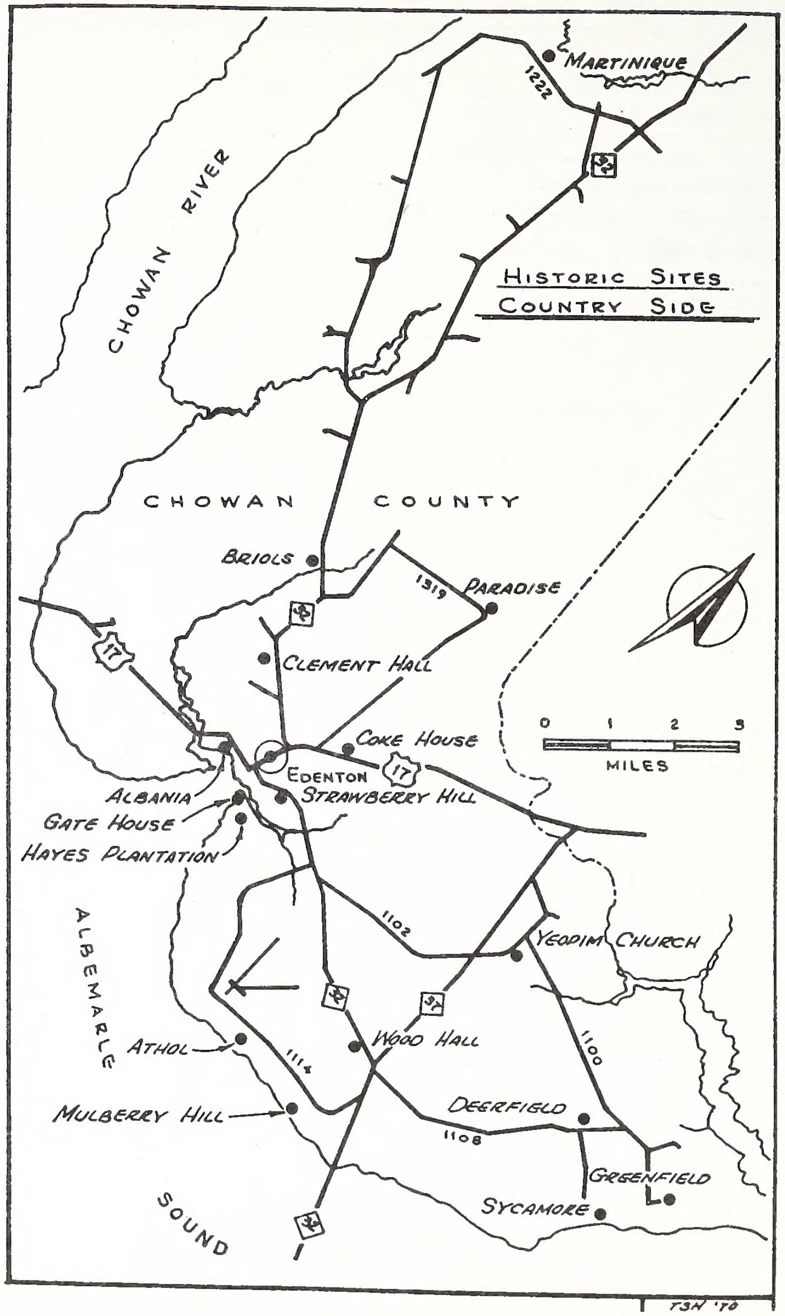
USDA-SCS-FORT WORTH, TEX. 1971

APPENDIX A
HISTORIC SITES IDENTIFIED ON MAP

Houses or points of interest numbered are given corresponding number located on map. For walking tours, 1-25 park at Barker House, 26-40 park at Iredell House. See Countryside map for those not numbered but located on map according to highway routes.

1. The Barker House
2. The Homestead
3. The Court House Green
4. The Millen House
5. The Bond House
6. The East Custom House
7. The Edmund Hatch House
8. The Coffield House
9. The Chowan County Court House
10. The Chowan County Jail
12. The James Iredell House
13. The Joseph Hewes House
14. The Ellison House
15. The Craven House
16. The Paxton House
17. Beverly Hall
18. Pembroke Hall
19. Wessington House
20. The West Custom House
21. The Littlejohn House
22. The Tredwell House
23. The Charlton House
24. The Cupola House
26. The Iredell House
27. The Edenton Academy
28. The Blair House
29. The McNider House
30. St. Ann's Church
31. St. Paul's Church
32. The Rector's Study
33. The Booth House
36. The Paine House
37. The Leigh-Bush House
38. The Leigh House
41. The Planter's Inn
42. Albania
43. Strawberry Hill
45. The Coke House

Briols
Clement Hall
Martinque
Paradise
Athol
Deerfield
Wood Hall
Yeopim Church
Mulberry Hill
Greenfield
Sycamore Plantation
Hayes
The Gate House



APPENDIX A+

INVENTORY OF HISTORIC AREAS

No.	Name or Identity of Area (*Indicates partially developed)	Location	Size of Area	Description of Area	Present Use of Area
1	*Barker House	Edenton	*N.S.	Built about 1782 - Home of Penelope Barker who presided over the Edenton Tea Party	Headquarters for Historic Edenton, Inc. and houses visitor center-museum
2	The Homestead	Edenton	N.S.	Built just before the Revolution by Robert Smith	Dwelling
3	Court House Green	Edenton	N.S.	Laid off in 1712, site of first court house built 1718. Used as a drill ground during revolution	Small Park
4	Millen House	Edenton	N.S.	Probably built about 1772 by Quentin Millen, Scottish merchant	Dwelling
5	Bond House	Edenton	N.S.	Built about 1804 by Joseph Blount Skinner. One member of household was Thomas Harvey Skinner, a founder of Union Theological Seminary	
6	East Custom House	Edenton	N.S.	Original part of present house built about 1807	Dwelling
7	Edmund Hatch House	Edenton	N.S.	Built around 1745	Dwelling
8	Coffield House	Edenton	N.S.	Original building built before 1799 incorporated in present house	Dwelling
9	*Chowan County Court House	Edenton	N.S.	Built in 1767 - considered the finest Georgian Court House in the South	Court House National Historic Landmark

+Source: The Potential for Outdoor Recreation in Chowan County, N. C., Chowan Co. Soil and Water Conservation Committee, Edenton, N. C.

APPENDIX A - continued

No.	Name or Identity of Area (*Indicates partially developed)	Location	Size of Area	Description of Area	Present Use of Area
10	Chowan County Jail	Edenton	N.S.	Built in 1788	County Jail
12	James Iredell, Jr. House	Edenton	N.S.	Built sometime before 1802	Dwelling
13	Joseph Hewes House	Edenton	N.S.	Built before 1769	Dwelling
14	Ellison House	Edenton	N.S.	Built before 1742 - Home of James Iredell, Jr. before he became Governor of North Carolina	Dwelling
15	Craven House	Edenton	N.S.	Built 1754	Dwelling
16	Paxton House	Edenton	N.S.	Built around 1799	Dwelling
17	Beverly Hall	Edenton	N.S.	Built 1810 - Originally used as a bank	Dwelling
18	Pembroke Hall	Edenton	N.S.	Built around 1813	Dwelling
19	Wessington House	Edenton	N.S.	Built about 1850 - plans adapted from "The Architect," Vol. I, published in 1847	Dwelling
20	West Custom House	Edenton	N.S.	Built about the beginning of the Revolution	Dwelling
21	Littlejohn House	Edenton	N.S.	Built before 1769. Home of Sarah Blount Littlejohn, signer of the Tea Party Resolutions	Dwelling

APPENDIX A - continued

No.	Name or Identity of Area (*Indicates partially developed)	Location	Size of Area	Description of Area	Present Use of Area
22	Tredwell House	Edenton	N.S.	Built around 1787 - Home of Samuel Tredwell, Collector of the Port of Roanoke, and his wife, niece of James Iredell	Dwelling
23	Charlton House	Edenton	N.S.	Built between 1761 and 1769 - Home of Abigail Charlton, first signer of Tea Party Resolutions	Dwelling
24	*Cupola House	Edenton	N.S.	Built about 1725 - finest Jacobean type house in the south. Georgian interior woodwork of house on display at the Brooklyn Museum of Fine Arts	House museum of the pre-Revolutionary period National Historic Landmark
26	*Iredell House	Edenton	N.S.	Built by 1759 - Home of James Iredell, Attorney General of N.C. at age 28, Associate Justice of Supreme Court of U.S. at 39	Owned by the State of North Carolina - used as a house museum of the 1775-1825 period
27	Edenton Academy	Edenton	N.S.	Built around 1800 - used as school 95 years. Cut into and moved across street for dwellings	Dwellings
28	Blair House	Edenton	N.S.	Built around 1774 - Owned by Thomas Courtland Manning, U.S. Senator and Minister to Mexico	Dwelling
29	McNider House	Edenton	N.S.	Built before 1769	Dwelling
30	St. Ann's Church	Edenton	N.S.	Built 1858	Church

APPENDIX A - continued

No.	Name or Identity of Area (*Indicates partially developed)	Location	Size of Area	Description of Area	Present Use of Area
31	St. Paul's Church	Edenton	N.S.	Building begun 1736 and completed 30 yrs. later, 2nd oldest church in State	Church
32	Rector's Study	Edenton	N.S.	May have been built as early as 1760	Part of St. Paul Church
33	Booth House	Edenton	N.S.	Built by 1791	Dwelling
36	Paine House	Edenton	N.S.	Built around 1844	Dwelling
37	Leigh-Bush House	Edenton	N.S.	Built around 1756	Dwelling
38	Leigh House	Edenton	N.S.	Built by 1759	Dwelling
41	Planters Inn	Edenton	N.S.	Built before 1813	Dwelling
42	Albania	Edenton	N.S.	Plantation - House built in 1857	Dwelling
43	Strawberry Hill	Edenton	N.S.	Farm - house built around 1780	Dwelling, Farm
45	Coke House	Edenton	N.S.	House built ca 1800	Dwelling
46	Briols	3 miles northwest of Edenton on N.C. #32	N.S.	House built ca 1760	Dwelling
47	Martinique	13 miles northwest of Edenton on SR#1222	350 ac.	Plantation - house built about 1752, example of double galleries and low ceilings	Farm and Dwelling

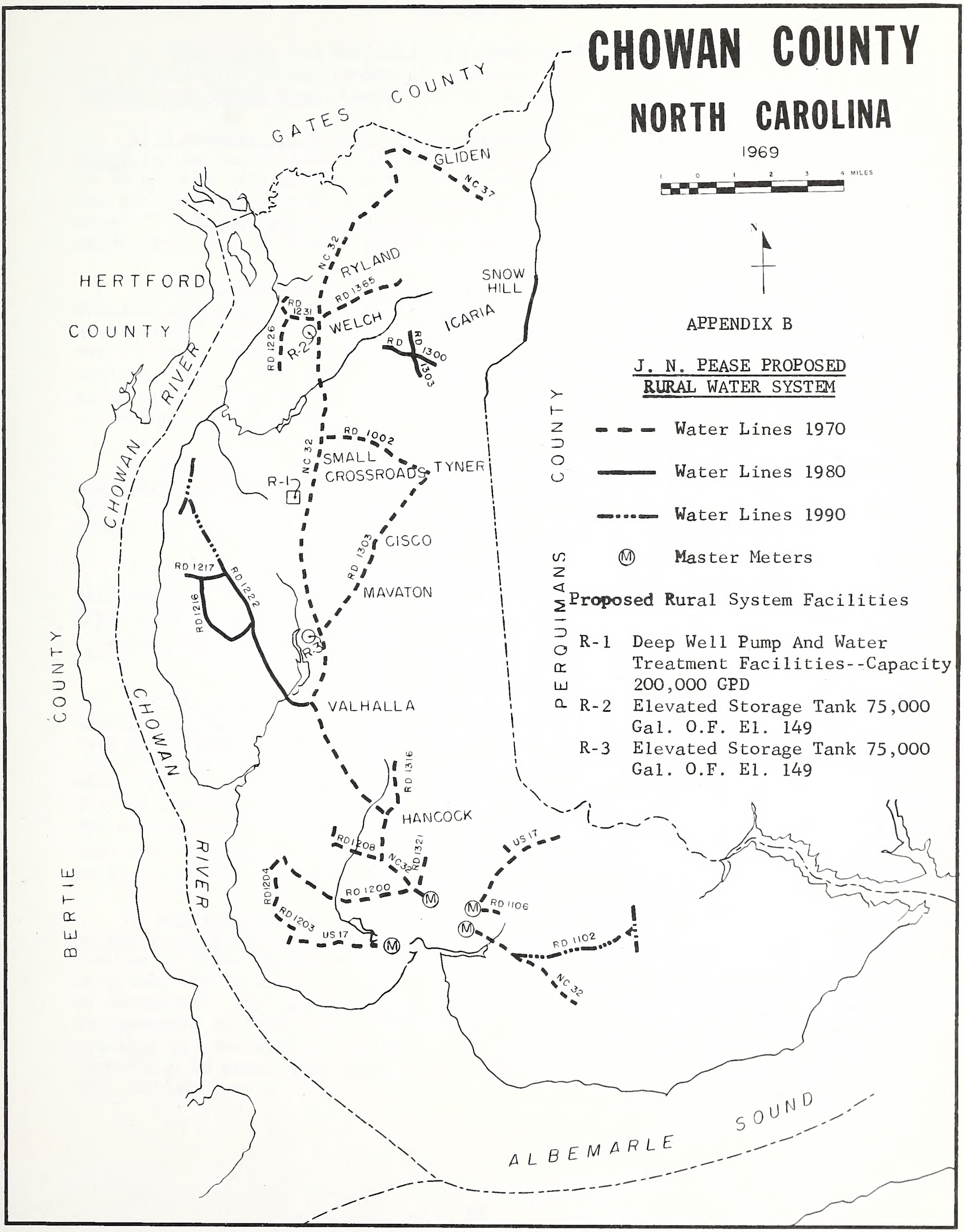
APPENDIX A - continued

No.	Name or Identity of Area (*Indicates partially developed)	Location	Size of Area	Description of Area	Present Use of Area
48	Paradise	3 miles north of Edenton on SR#1319	150 ac.	Farm - house built in 18th Century	Farm and Dwelling
49	Clement Hall	1½ miles northwest of Edenton on N.C. #32	Approx. 500 ac.	Plantation - Clement Hall was Rector of St. Paul's Church (1744-1759)	Farm
50	The Gate House	Southeast of Edenton at Hayes	N.S.	Original part of house was standing in 1765. Samuel Johnston lived here while building Hayes	Dwelling
51	Hayes	Just southeast of Edenton	1500 ac.	Plantation - House built by Samuel Johnston 1789-1801. Johnston was first Senator from N. C.	Farm and Dwelling
52	Mulberry Hill	2 miles east of Edenton Municipal Airport on SR#1119	400 ac.	Plantation - House built prior to Revolution	Farm and dwelling
53	Athol	East of Edenton Municipal Airport off SR#1119	N.S.	Plantation - house built around 1837	Dwelling
54	Sycamore Plantation	11 miles east of Edenton on SR#1110	100 ac.	Plantation - house built in 1660	Dwelling
55	Greenviled	13 miles east of Edenton on SR#1109	1000 ac.	Plantation - house built in 1752	Farm and Dwelling

APPENDIX A - continued

No.	Name or Identity of Area (*Indicates partially developed	Location	Size of Area	Description of Area	Present Use of Area
56	Deerfield	10 miles east of Edenton on SR#1108	N.S.	House built shortly before the Revolution	Dwelling
57	Yeopim Church	6 miles east of Edenton on SR#1102	N.S.	Present building built around 1851	Church
58	Wood Hall	5 miles east of Edenton on NC#32	200 ac.	Plantation - house built 1853	Farm and Dwelling

*N.S. - not significant



CHOWAN COUNTY

NORTH CAROLINA

1969

APPENDIX B

J. N. PEASE PROPOSED RURAL WATER SYSTEM

▬ ▬ ▬	Water Lines 1970
━━━	Water Lines 1980
▬•••▬	Water Lines 1990
Ⓜ	Master Meters

Proposed Rural System Facilities

R-1	Deep Well Pump And Water Treatment Facilities--Capacity 200,000 GPD
R-2	Elevated Storage Tank 75,000 Gal. O.F. El. 149
R-3	Elevated Storage Tank 75,000 Gal. O.F. El. 149

APPENDIX C

As required by the National Environmental Policy Act of 1969 (P.L. 91-190), the following is an environmental assessment of the Land Potential Study and Sketch Development Plan, Chowan County, N. C.

1) A summary or abstract of the proposed plan or policy; the Land Potential Study is the basic element of the Sketch Development Plan. Its primary purpose is to provide information as to the potential the land within Chowan County has for residential, agricultural, recreational, commercial, and industrial development. The Sketch Development Plan illustrates the most desirable arrangement of major land uses in Chowan County for the next twenty years.

2) The environmental impact (beneficial as well as adverse) of the proposed plans or policies, if they are carried out; provided all the information contained herein is considered prior to development, then little or no adverse environmental impact would result. The Land Potential Study and Sketch Development Plan analyzes most all factors influencing development within the County and attempts to provide a guide for development which will minimize human, material, and environments costs associated with County growth.

3) Any adverse environmental effects which cannot be avoided should the proposed plans or policies be implemented; minimal adverse environmental impact would result with the recommended policies in this study. Micro-environmental impact is undeterminable without knowledge of specific projects.

4) Alternatives to the proposed plans or policies and an analysis of those alternatives; the alternative to the Land Potential Study and Sketch Development Plan would be not to have collected this information. Without this information a Sketch Development Plan would be extremely short sighted and without basis, and would undoubtedly be more costly from an environmental standpoint.

5) The relationship, under the proposed plans or policies, between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. As stated in number 3 above, there would not be any adverse environmental impact with the policies recommended in this study. The maintenance and enhancement of the long-term productivity of man's environment would only be improved. Admittedly, impairment of the environment could result once the construction of specific projects are undertaken, but the purpose of all land use planning is to guide development while at the same time minimizing social, aesthetic, and environmental costs.

6) Any irreversible and irretrievable commitments of resources which would be involved if the proposed plans or policies should be implemented; with the exception of those commitments of resources which normally accompany actual construction, there would be very little irreversible and irretrievable commitment of resources. The Land Potential Study together with the Sketch Development Plan are designed to limit the ill-effect of the environment to the greatest extent possible by considering land potential prior to its development. In this manner, growth can be encouraged where social, physical and natural conditions would best accommodate it.

7) A statement setting forth applicable Federal, State, and local environment controls. The environmental controls of N. C. State Building Code, Subdivision Regulations, Zoning, and minimum housing codes are enforced within the Town of Edenton and its extra-territorial area. While in Chowan County environmental controls consist of District Health Department regulations and Subdivision Regulations.

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